

Military balance in the Asia-Pacific: trends and implications

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**“Military Balance in the Asia-Pacific:
Trends and Implications”***

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Introduction

In the 1990s, the strategic landscape of the Asia-Pacific region has undergone fundamental changes. Since the end of the 1980s, security concerns about modern arms acquisitions have increased in North- and Southeast Asia due to the proliferation of mass destruction weapons (WMD) and of advanced high-tech conventional weaponry. While the traditional significance of ground forces has been reduced, naval and air forces of most countries in the Asia-Pacific region have rapidly been modernised and, therewith, have improved their power projection capabilities. These trends are reflected in the defence planning of China, Japan, Korea, and Taiwan as well as in planning by Southeast Asian countries. Within a decade or less, several modern navies and air forces could join the US Navy in patrolling the South China Sea and Philippine Seas. Those seas could, however, be a very inhospitable wartime environment for major naval combatants. Every part of them could become within range of aircraft and surface-to-sea missiles based on islands on all sides. Therefore, even the US Navy - despite its greatly

* This analysis is based on findings of a research project at the Research Institute of the *German Council on Foreign Relations (DGAP)* in Berlin.

enhanced intelligence, air defence, and anti-missile capabilities - needs to adjust its future operations to take into account this new reality.

These strategic trends are the result of a complex security environment in Asia-Pacific, high economic growth rates and the fact that modern weaponry acquisitions have become more easily affordable due to the end of the Cold War and to shrinking military budgets in North America, Europe and Russia. All leading arms manufactures in the US, Europa and Russia are competing vigorously for the smaller regional and global arms markets that, ultimately, have threatened multilateral arms control efforts. While so global defence budgets have been reduced since the beginning of the 1990s, East Asia - together with the Persian Gulf and the Middle East - is the only region in the world that has significantly increased its defence spending. Thus the region is approaching an unprecedented arms race, fueled by new economic growth and an increasing globalization of security policies, and partly driven by inter-regional and global dual-use technology transfers.

In contrast with Europe and the Soviet-American strategic relationship during the Cold War, however, arms control policies continue to rank low on East Asia's agenda.¹

The Asian financial crisis 1997-98 has resulted in drastic cuts to the defence budgets of those countries most affected such as South Korea, Indonesia, Thailand and Singapore. Despite some postponements of weapons acquisitions, the Asian financial crisis has, simultaneously, halted and fastened a process of force modernisation. At the same time, the UN peacekeeping mission in East Timor and increasing piracy attacks in Southeast Asia have also highlighted and exposed structural and organisational weaknesses in Southeast Asia's military capabilities. Confronted with these exposed weaknesses and negative impacts on defence modernisation, countries in the region have begun to adjust to the crisis by re-evaluating their defence modernisation needs. While transnational security challenges such as drug smuggling, illegal migration or environmental degradation seemed rather peripheral until the outbreak of the Asian crisis, governments are responding meanwhile by utilizing military forces to cope with them. However, given limited defence resources, regional military forces might be tempted by drug profits and other forms of corruption. Nonetheless, during the last decade, civil-military relations have improved significantly in a way that armed forces have become more supportive to democratisation as the examples of Taiwan, Thailand and even Indonesia are demonstrating —

even when it is to a different extent. Hence fears of military coups have subsided gradually albeit one cannot completely exclude those *coup d'états* in countries such as Indonesia or North Korea in the foreseeable future. As a new military mission, the increasing military involvement in humanitarian and disaster relief missions is thus not only growing in Europe, but in Asia-Pacific too. The professionalisation of the armed in the region gives them new tasks and offers many advantages, including a new legitimacy in the 21st century.

But the continual '*Revolution of Military Affairs (RMA)*' also poses severe complicating factors by increasing the costs of defence modernisation and the time of effective military training. Peacekeeping and peacemaking operations, as East Timor and many others cases have demonstrated during the last years, require, for instance, much more inter-service and regional cooperation for effective and successful missions. Furthermore, despite this positive evolution, the possibility of interstate war and conflict cannot totally be negated for the time being. Thus the costs for both, traditional warfighting missions and new military operations for peacekeeping and peacemaking are extremely high and will increase further.

Although a number of positive trends in domestic and economic policies can be confirmed, the future regional stability remains rather unpredictable, due to inherent dynamics of political and socio-economic transformations in domestic policies of many countries in the region, unfolding at the end of the 20th century. Moreover, these first positive steps are part of a longer and deeper socio-economic transformation which will only succeed when transformation strategies are supplemented by coherent political reform aiming at the establishment of genuine democracies, pluralist societies. In this regard, the verdict on the longer-term sustainability of the present recovery is still open.²

Against this background of sometimes contradicting trends in the regional military postures and civil-military-relations, defence spending is increasing again according to new data.³ The following analysis reviews the arms modernisation processes in the 1990s both before the Asian financial crisis and its impact on them. Special attention will be given to China's conventional and nuclear armed forces which are deeply influence security perceptions of regional as well as external powers that have interests and involvement in Asia-Pacific. A final chapter will analyse the implications of the renewed modernisation efforts on the sub-regional and regional military balances.

Strategic trends of arms modernisation efforts before the outbreak of the Asian crisis

During the last decade, almost all armed forces in the Asia-Pacific region have acquired new military capabilities as they have focused increasingly on maritime security issues instead of internal affairs as was their previous pre-occupation. They have acquired advanced combat aircraft, modern warships, state-of-the art missiles, and other modern weapon systems with increased accuracy and range that have transformed their armed forces into more deadly military organisations. The focus of their weaponry acquisitions already involved smart weapons, electronic warfare systems, infor-war countermeasures, stealth technologies, remotely pilot vehicles, in-flight refueling, anti-missile defences, and the development of airlift and sealift capabilities for their newly created *Rapid Reaction Forces*. Simultaneously, the boundary between increasingly lethal conventional weaponry and weapons of mass destruction - nuclear, chemical and biological weapons (WMD) is being effectively erased and becomes less and less important from a military standpoint. Moreover, if the economic and technological infrastructure of the East Asian states is further modernised, their industrial capabilities will also increase to adopt most modern technologies from abroad.

Thus far, Western experts were divided in their opinions whether these arms procurements in East Asia could already be characterised as an *'arms race'* or merely as an *'military build-up'*, a *'military modernisation process'* or an *'arms competition'*.⁴ Any full scale assessment of the ongoing military buildup has to look at the following three basic components of an integrated, long-range strategic design of the East Asian states: (1) arms purchases/military spending, (2) military organisation (military structures, doctrines and strategies), and (3) military industrialization. In this light, only a careful and deeper analysis in a broader concept of shifting defence policies can deliver adequate answers. Such an analysis has to take into account the shifting geopolitical and geostrategic landscape, threat perceptions (and other domestic factors) as well as military doctrines and strategies which have to determine weaponry procurement programmes. Otherwise, like many other analyses that tried to answer the questions raised above, an analysis would inevitably be short of *'bean counting'* with limited analytical insights for addressing the real questions in the Asia-Pacific region: military stability in general and crisis stability in particular.⁵

Security analysts agree that all North- and Southeast Asian states increased and modernised their military forces, primarily their air and naval forces, at a time when the United States and Russia reduced their military expenditures after the end of the Cold War. Given the fact that the Asia-Pacific region is largely a maritime area, its control depends heavily on air and naval superiority. Therefore, while taking into account the numerous unresolved territorial conflicts, a modernisation of air and naval forces is dictated by the future security demands of these countries.

The broadening scope of regional security does not only encompass the traditional configuration of power such as military forces, the management of conflict, and the protection of *Sea Lanes of Communication (Slocs)*. Since the beginning of the 1990s the reduction of the US presence, the need to monitor natural resources, to supervise labor migration and piracy, as well as to regulate environmental problems all contributed to major investments in East Asia's air and naval forces. Furthermore, since the 1982 *UN-Convention on the Law of the Sea (Unlocs)* came into force in 1994, military commanders in almost all East Asian countries used Unlocs to justify additional naval and air power to patrol the new offshore zones and to protect their newly claimed national sovereignty.

In contrast to former times when in particular Southeast Asian states had preferred to purchase light air-fighters for anti-guerrilla warfare or to procure weaponry for prestige reasons rather than for real military missions, all East Asian states acquired advanced multi-role combat fighters and maritime reconnaissance aircraft in the 1990s. The numbers of aircraft deliveries and the quality of the most advanced types of those aircraft significantly increased, particularly during the four last years. During this decade, more than 3,000 new fighters and strike aircraft (such as the new dominant war-fighting weapons) were originally expected to be purchased by Asia-Pacific states including such advanced state-of-the-art fighters as Russian made *Mig-31s* and *-29s*, *SU-24s*, *SU-27s*, *SU-30s*, US-made *F-15s*, *F-16s*, *F/A-18s*, French-made *Mirage 2000-5s* or Japanese-made *FS-Xs* (or *F-2*). An equal number of existing aircraft were also expected to be modernised with new avionics systems and weaponry.⁶ Indeed, some 1,500 military aircraft and 6,800 SAMs, SSMs and anti-ship missiles had been delivered by overseas suppliers to the Asia-Pacific region and a broad range of related systems were added to these between 1990 and 1995.⁷

Moreover, each year around 3,300 modern missiles for the new

aircraft, naval and land forces had been introduced into their arms arsenals. In the naval forces, some 200-250 new major surface vessels were originally planned for procurement by the new century. As the first country in East Asia, Thailand acquired from Spain at a cost of 360 million US-\$, a 11, 200-ton light aircraft carrier with a `ski jump` flight deck which carries up to 12 V/STOL AV-8 Matador aircraft and six S-70B Seahawk helicopters. Furthermore, international experts expected that more than 36 new modern submarines will be acquired by Asian states in the next decade - primarily by Japan, South Korea, Malaysia and Indonesia.⁸ Other Asian states had also considered buying new submarines but had shifted some of their current procurement plans into the next century before the financial and economic crisis hit the region in the summer of 1997.

To sum up these acquisitions trends of new platforms and armaments before the outbreak of the Asian crisis in 1997:

- The new weaponry acquisitions would allow many navies for the first time in East Asia to operate across the open ocean together with the US Navy. Therewith, the primary of their armed forces would shift gradually from the mission of counter-insurgency to external defence with conventional operations against high-tech regional opponents. While the residual potential for insurgency threats would not become obsolete, it would be downgraded to a secondary mission.
- Moreover, all new major procurement programs of advanced modern weapon systems of the East-Asian armed forces also covered the acquisition of advanced electronic systems that included enhancements of technical intelligence capabilities, particularly of signals intelligence (SIGINT). The modernisation of command, control, communication, computer and intelligence (C⁴I)-infrastructure with microwave and fiber-optic channels to a country-wide C⁴I-network - as it was already under way, for instance, in Singapore and Japan⁹ - could significantly improve both defensive and offensive capabilities of the Asian-Pacific armed forces.
- Furthermore, the RMA has the potential to give even small armed forces (like Singapore's) a hitherto unknown lethality and power projection capability (with an enhanced flexibility, range and precision engagement they never had before) well beyond its physical size of platforms and numbers.

On the other hand, however, it was already at that time necessary to state that purchases of sophisticated conventional weaponry did not translate automatically into competent and effective military organisations. With the exception of Singapore, Japan, South Korea and Taiwan, the acquisition of modern weaponry had been in many East Asian countries - albeit to a different extent - often disorganised, inefficient and uncoordinated. An US expert concluded in 1997 that their procurement policies are '*not an arms race to counter an external threat, but an arms rush to possess the newest weapons.*'¹⁰ However, this conclusion was not very reassuring either for the future stability of the region.

The procurement decisions also mirrored in the increasing military expenditures of East Asian states (see *Table 1*) though they have been not necessarily and always related to arms procurement programmes. The volatile Middle East was buying more weapons, but East Asia had the most rapid growth in military expenditure during the past decade. At the same time, it was to a great extent the result of its rapid economic growth. While global defence expenditures declined in the 1990s, the share of deliveries of major conventional weapons to Asian countries rose from 31 per cent to 49 per cent in the period 1988-97.¹¹ The aggregate increase of military expenditures in the region during that

Table 1: Post-Cold War changes of North and Southeast Asian defence budgets (1990-1996)

	1990	1991	1992	1993	1994	1995	1996	percent change 1990-1996
USA.	293.0	283.5	274.8	287.2	251.4	252.4	252.6	- 13.8
USSR	116.7	—	—	—	—	—	—	—
Russia	—	—	85.9	75.1	78.5	62.8	48.0	- 44.1
Japan	28.7	32.7	35.9	39.7	42.1	53.8	45.1	+57.1
PR China	6.1	6.1	6.7	7.3	6.7	7.5	8.4	+37.7
Taiwan	8.7	9.3	10.3	10.5	11.3	13.1	13.6	+56.3
South Korea	10.6	10.8	11.2	12.1	14.0	14.4	15.6	+47.1
North Korea	5.3	2.4	2.1	2.2	2.3	2.2	2.9	- 54.7
Vietnam	KA	1.9	1.8	KA	0.9	0.9	1.0	KA
Indonesia	1.5	1.6	1.8	2.0	2.3	2.6	3.0	+100.0
Australia	7.0	7.1	7.0	7.0	6.9	7.4	7.3	+4.3

Source: IISS (Ed.): *The Military Balance, 1990-96* eds., in: Kent E. Calder, '*Asia's Deadly Triangle. How Arms, Energy and Growth Threaten to Destabilize Asia-Pacific*', (London 1997), p. 140.

period was more than one-quarter.¹² According to a ACDA study of 1998, Asia accounted for 43.2 per cent of all arms transfer agreements signed with developing nations between 1989 and 1992 and 33.6 per cent of all such accords between 1993 and 1996.¹³

Since 1985, nearly all *Northeast Asian* states (China, Japan, Taiwan, North- and South Korea) increased their defence budgets significantly and continually by more than one third, almost a quarter since 1992. In total, these five countries were responsible for more than 70 per cent of all military expenditures in East Asia. During 1991-93, this subregion accounted for 85 per cent of aircraft imports and 89 per cent of missile imports in East Asia as a whole. China (which also ranked fourth among exporters of major conventional arms worldwide), South Korea and Taiwan belonged to the top ten countries in the world accounted for more than 50 per cent of the major conventional weaponry imports in 1995. However, on the whole they had been able to increase their annual defence expenditures without raising the percentage of their *gross domestic product (GDP)* devoted to the military.

In *South-East Asia* as well, military expenditures only increased at the same rate as the GDP (with the exception of Myanmar and Singapore). Between 1988-1996, military expenditures in the Asean countries increased by an aggregate of 52 per cent in real terms. But taken as a whole, Southeast Asian states were spending significantly less compared with their Northeast Asian neighbours. Nonetheless, the total annual defence budgets of 11 Southeast Asian countries was 1.3 times higher than seven Middle East countries and three times higher than the budgets of 10 countries Latin America between 1980 and 1996.¹⁴

The *I/SS* annual military survey of 1997/98 confirmed these trends by pointing out that the Middle East/North Africa remained the largest arms-importing region with 39.5 per cent of the total in 1996, whilst North- and Southeast Asia absorbed 23 per cent of the global arms market with purchases of 8.9 billion in constant 1995 US-\$ (compared with 22 per cent or 8.5 billion \$ for Nato and Western Europe).¹⁵ East Asia accounted for around one-fifth of the global arms trade and was, thereby, the second largest regional arms buyer. For the first time in the 20th century, it was offsetting the arms purchases of Nato-member states and other West European countries (see *Table 2*).

On the other hand, it is important to note here that - according to *I/SS* data - total weapon purchases by East Asian countries (in constant 1995 US-\$) were in 1995 (US-\$8.5 billion) and 1996 (US-\$8.9 billion) lower than in 1987 (US-\$10.1 billion - see again *Table 2*).

Table 2: The global arms market

Arms Delivered by Region (Purchases in Constant 1995 \$ bn)	Market		Market		Market		Market		Market	
	1987	Share	1994	share	1995	Share	1996	Share	1997	Share
Middle East/ North Africa	31.9	37.5%	11.9	36.3%	14.4	39.0%	15.3	39.5%	15.6	33.7%
East Asia	10.1	11.9%	7.0	21.4%	8.5	23.1%	8.9	23.0%	14.7	31.7%
NATO/Western Europe	15.1	17.8%	9.3	28.5%	8.6	23.4%	8.5	22.0%	9.3	20.2%
Latin America	5.1	6.0%	0.8	2.4%	1.5	4.2%	1.6	4.1%	1.9	4.3%
South Asia	6.3	7.4%	0.9	2.7%	1.3	3.6%	1.4	3.6%	1.7	3.6%
Eastern Europe	6.9	8.1%	1.3	4.0%	0.8	2.3%	1.2	3.1%	0.8	1.8%
Sub-Saharan Africa	6.5	7.7%	1.0	3.2%	0.3	0.8%	0.7	1.9%	0.9	2.1%
Australasia	1.2	1.5%	0.4	1.3%	1.0	2.6%	0.7	1.9%	0.7	1.6%
CIS/USSR	1.8	2.1%	0.1	0.3%	0.3	0.9%	0.3	0.8%	0.4	0.9%

Source: IISS (Ed.): *Military Balance 1997/98*, Oxford-New York 1997, S. 265; ebda 1998-99, Oxford-New York 1998, p. 272.

According to *SIPRI* analyses, however, East Asia's share of the global arms market was even bigger and, indeed, already became the largest arms market and largest arms market in the world: The share of global imports of major conventional weapons to *Asian* countries in total (which include - in contrast to the IISS data referring only to North- and Southeast Asia - also South-Asian, Australasia and Central Asian countries) rose from 28 per cent in 1992 to 48 per cent in 1996 (according to IISS figures - see *Table 2* -, North- and Southeast Asia, South Asia, Australasia and Central Asia have no more than 29 per cent in total).¹⁶

All military expenditures in Asia, with some exceptions, thus mirrored a steady rather than an excessive trend in arms procurement. But sustained modern weaponry procurement was not the only reason for the increase of military expenditures. The expected lifecycle (or through-life) costs such as in-service life of modern combat platforms, their prime costs and through-life support also increased significantly at the same time both on the regional and global scales.

Given the fact that most of the military expenditures were still in accordance with the increase of the GDP or even less (see above *Table 3*), one could conclude that an '*arms race*' was not taking place or that the '*arms build-up*' in South- and Northeast Asia had been overstated before the outbreak of the Asian crisis. However, the data was and is often insufficient and many factors had often been overlooked¹⁷:

Table 3: East Asian defence spending as a percentage of GDP (1985, 1993-1998)

	1985	1993	1994	1995	1996	1997	1998
PR China	7.9	5.3	5.3	5.9	5.7	5.7	5.3
Indonesia	2.8	2.1	2.2	2.2	2.1	2.2	2.3
Japan	1.0	1.0	1.0	1.0	1.0	1.0	1.0
South Korea	5.1	3.6	3.3	3.4	3.7	3.3	2.3
Malaysia	5.6	4.5	4.3	4.5	4.2	3.4	3.2
Myanmar	5.1	7.0	7.5	7.5	7.6	7.7	6.8
Philippines	1.4	2.0	2.0	2.2	2.2	1.9	1.5
Singapore	6.7	4.6	4.3	4.9	4.7	4.8	4.4
Taiwan	7.0	5.4	4.7	5.1	4.8	4.6	4.5
Thailand	5.0	2.6	2.5	2.6	2.9	2.2	1.5
Vietnam	19.4	3.9	4.8	4.5	4.0	3.9	2.8

Source: Tim Huxley/Susan Willet, 'Arming East Asia', *Adelphi Paper No. 329* (IISS, London), Oxford-New York 1999, here p. 17.

There are specific hidden costs from the civilian sector to the defence effort - related both to infrastructure (use of civilian airfields for military aircraft) as well as to platforms such as new roll-on-roll-off ferries (with military applications specifically in mind).

- (1) Comparable defence budgets according to clear common defined criteria (as they exist in NATO, for instance) do not exist until today despite some progress has been made by publishing defence 'White Papers' for the *ASEAN Regional Forum (ARF)* during the last years. The defence budget of China, for instance, is not yet comparable with others because it does not include military pensions, research and development (R&D), foreign arms acquisitions, and the costs of reserve and militia forces. The *IISS*, for example, has estimated the Chinese defence budget nearly three to five times the official figure because it does not report its military expenditures to the UN registry in the standardised format.¹⁸ It seems plausible that the technological modernisation of China's armed forces is - at least partly - masked by considerable non-defence funds.
- (2) Many difficulties in accurate assessments of the total international arms market: apart from a lack of transparency on the supplier's and buyer's sides, published figures mostly include only cash transactions. Other innovative ways in which many arms deals are nowadays increasingly being financed (such as by trading for debt forgiveness and by bartering for other products like consumer goods, food or oil) are often either underestimated or even overlooked.¹⁹

Furthermore, the political obstacles to overcome these difficulties of assessing the total defence expenditures and to limit the arms buildup are still considerable in East Asia: The establishment of viable, indigenous defence industries as part of their self-sufficiency policy to reduce their dependencies on suppliers abroad is a declared national policy goal. Any policies to reduce defence expenditures and subsidies for their emerging defence industries - even then when they acknowledge that their self-sufficiency policies and the subsequent creation of military industries are not cost effective²⁰ - have been opposed not only by the military, but also by significant and influential parts of the political and industrial elite of these countries as the Asian crisis confirmed.

Ultimately, however, it is always less the amount of defence budgets in relation to GNP/GDP which raises concerns for security and stability in the region. It is rather the nature, the quantitative and qualitative acquisition of weaponry, its specific programs to strengthen rather offensive military capabilities and the shifting geopolitical and geostrategic landscape in context of the arms procurement that demand further attention and more transparency. Military '*hardware*' is only an indicator that has to be analysed in the wider context of its '*software*' - military doctrines and strategies as well as structures of the armed forces - which only combined determine '*warfighting capabilities and postures*'. Hence, as I have already argued, acquisitions of weapon systems do not translate automatically to enhanced operational and warfighting capabilities. In this light, numbers do matter - but only to the extent of other important and often overlooked variables such as the software of military capabilities.

Indeed, almost all North- and Southeast Asian armed forces began to undergo a fundamental change from internal to external defence as a priority of their defence policies and contingency planning. Those shifts from counter-insurgency capabilities to modern, high-technology conventional forces, with increased emphasis on maritime warfare had been seen as a natural process in the light of the maritime geography of East Asia, widespread perceptions of numerous uncertainties, unresolved territorial conflicts (often linked with disputed energy resources), and the arms buildup of their neighbours.

The strategic value of the South China Sea for all neighbouring countries for instance, is a result of not only assumed rich resources like oil, gas, minerals and fisheries but equally from the free movement of the major international shipping lanes in the South China Sea because

most of the foreign trade is by sea. The signing of the *UNCLOS* in 1982 and the spectacular economic growth and regional trade have reinforced the strategic importance of the archipelagic sea-lanes of communication (Slocs) in East Asia such as the *Malacca Strait*, the alternative *Sunda* and *Lombok* passageways as well as the sea-lanes around the *Spratly islands*. They have been recognized as being among the most critical choke-points. These Slocs were and are of vital security concern to virtually all states in South- and Northeast Asia.

Even countries like Thailand and South Korea with their traditional priority for ground forces began to shift their procurement policies to maritime missions. Though South Korea's threat perception was still primarily directed towards its northern brother and its military capabilities of ballistic missiles, equipped with possible ABC-warheads, at the same time it was looking forward toward an increasing naval power that commensurates with its increasing national economic strength and its dependencies on the regional and global markets. Similar to Japan, about 99 per cent of South Korea's trade is done by water. In the view of South Korea's security experts, the protection of Slocs could no longer be exclusively the task of the US Navy on which South Korea was dependent hitherto. Given the space of time of 10-15 years for major procurement planning, defence experts pushed a strong South Korean naval power - including to obtain at least a 15,000-ton light aircraft carrier and new destroyers, frigates and submarines - to serve as a '*balance of power*' between China and Japan (the latter was and is often seen in South Korea as '*the next greatest military threat*' in the 21st century which reflects Seoul's still existing mistrust of its neighbour).²¹

As military planners increasingly recognised in Asia-Pacific, the shifts to external defence planning and the inclusion of new technologies based on the RMA also require new military doctrines and structures of East Asia's armed forces. Given the uncertainties of future conflicts - high-intensity, medium-intensity and low-intensity conflicts -, military doctrines of flexible responses have to be developed and implemented for multiple missions across an extensive spectrum of contingencies such as deterrence, coercion, warfighting, policing, peacekeeping, peace-enforcement, humanitarian aid and assistance to the civil authority. All these new doctrines need to be based on integrated, joint, combined, and coalition warfare to produce cumulative, synergistic effects on air-land and sea-space military operations. These future military organisations would be characterised by high mobility, flexibility, adaptability, and decentralisation. In this light, the RMA demanded reforms not only in the

military or military-industrial sector, but in education and other areas as well. But most of the Asian-Pacific armed forces had only limited experiences with integrated, combined and multilateral military missions and joint warfare concepts of their different services until the beginning of the Asian crisis. In many ways, they were insufficiently prepared for the new challenges - not only technologically, but also *politically* to cope with transnational security challenges and international peacekeeping as well as peacemaking operations.

Given the need for complex high-technology weapon systems and intensive training requirements to master the full spectrum of these capabilities, conscript armies are becoming more and more a structure of the past. In the next decade, massive armies with outdated capabilities will be replaced by small high-tech forces that are able to exploit new technologies and highly trained as well as motivated skills of their soldiers.

Even before the looming financial and economic turmoil, it was unclear whether the armed forces in the region would really be able to exploit the full spectrum of the newly acquired military capabilities. It depended not so much on the military hardware but rather on the software of military organisations: adequate structures of the armed forces and according military doctrines, strategies, operational plans and realistic as well as adequate contingency planning. It was and is the area where most of East Asia's military elite is facing the greatest difficulties in changing their military organisations. The significant weaknesses in combined or joint force operations and integrated logistical support as well as the still existing predomination of separate single-service cultures were identified as the main barriers in changing the military organisations according to the needs of the RMA in the region.²²

However, the structures of the armed forces were in almost all Asian states under consideration. Others had already changed to more mobile and mechanised forces such as amphibious units or '*Combined Arms Divisions*' with mixing infantry, artillery, reconnaissance, air defence and engineer elements.²³ A fundamental restructuring capabilities to modern, high-technology conventional forces, with increased emphasis on maritime warfare, seemed to be in the process of implementation. Indonesia had already formed a *Rapid Reaction Strike Force* in 1984; Malaysia was introducing a *Rapid Deployment Force (RDF)* of divisional strength (about 12,000 troops), Singapore and Thailand also announced plans to create a RDF division.²⁴

The creation of such RDFs would determine new weaponry procurement such as the purchase of large numbers of new helicopters in the forthcoming decade to transport those new mobile units to the hot spots whilst others are needed for fire support.

In general, those transformations of Asia's armed forces would considerably extend their force-projection capabilities for securing their EEZs and Slocs. In times of serious crisis and growing instability, however, they could also destabilise and undermine crisis stability by creating pressures for pre-emptive or even preventive military options. Moreover, arms acquisitions always occur in a concrete internal or external political environment. They could even unintendently determine future threat perceptions of both friends and adversaries.²⁵ Given a rapidly deteriorating situation on the Korean peninsula, in the Taiwan Strait or the South China Sea, the most important as well as most disturbing trends of weaponry acquisitions until 1997-98 can be summarised as following:

- Restructuring counter-insurgency capabilities of Northeast and Southeast armed forces to modern, high-technology conventional forces, with increased emphasis on maritime warfare. Even in countries like South Korea²⁶ or Thailand with traditional priority for land forces, the modernisation of air and naval forces had been given preeminence. The defence planning and the threat perceptions were shifting increasingly from internal to external defence missions;
- Proliferation of offensive capabilities such as (maritime) attack aircraft, submarines equipped with long-range anti-ship missiles;
- Ballistic missiles and cruise missiles with low observable technologies and considerable accuracy and penetration against existing and non-existing anti-missile shields. In littoral warfare conditions, the reaction time from launch to detection would be limited to seconds at the beginning of the new century;
- Widespread interest in modern electronic systems for C⁴I and electronic warfare, surveillance, intelligence and target acquisition equipment; and
- Increasing military capabilities in key areas of combat systems, electronic countermeasures, over-the-horizon targeting and surveillance.

Impacts of the Asian Crisis on the military modernisation: an end of the regional arms buildup? - images and realities²⁷

Even before the outbreak of the financial crisis in the summer of 1997, economic problems began to affect regional arms spending. As the result of the financial and economic malaise starting in July 1997, most Southeast Asian countries (with the notable exception of Singapore and Brunei) and South Korea in Northeast Asia have seen their currencies substantially drop in value against the US\$ by 32-70 percent until the end of 1998 (see also *Table 4*). The crisis had an unpleasant impact on national budgets, with the defence sector most strongly affected by cost-cutting measures.

The depreciation of national currencies left many governments unable to meet existing financial commitments or to push through new and ambitious long-term purchase plans or near-term procurement funding for new weaponry. The proclaimed cuts in the defence budgets hurt military modernisation plans and hindered operational activities. Cuts in military training, exercises and procurement had affected and ultimately undermined operational readiness of the armed forces for peace- and conflict times. Moreover, rising levels of inflation and unemployment produced more immediate consequences for national security. The most direct victim of the economic crisis was Indonesia which also witnessed the sudden collapse of the 32-year Suharto regime.

Table 4: East Asian Economies, 1996-1999

GDP Growth					Change in Currency Value against US\$
	1996	1997	1998	1999	June 1997-May 1999
China	9.6%	8.8%	7.8%	8.2%	no change
Indonesia	8.0%	4.9%	-13.7%	-3.9%	-69%
Japan	3.8%	-0.7%	-2.1%	-0.7%	-8.0%
South Korea	7.1%	5.5%	-5.5%	3.7%	-26%
Malaysia	8.6%	7.8%	-7.0%	2.0%	-34%
Philippines	5.8%	5.2%	-0.5%	2.3%	-30%
Singapore	6.9%	8.0%	1.5%	2.0%	-17%
Taiwan	5.7%	6.8%	4.8%	4.5%	-15%
Thailand	5.6%	-1.3%	-7.0%	-0.5%	-30%

Source: Tim Huxley/Susan Willet, 'Arming East Asia', *Adelphi Paper No. 329* (IISS, London), Oxford-New York 1999, here p. 17.

Finally, the crisis has also affected the fate of political leaderships in Malaysia, Thailand, South Korea and Japan. Understandably, the immediate tasks for several Asian countries has been seen in the restoration of political stability and the creation of a conducive climate for economic recovery and growth.

Regional military expenditures were basically affected in two ways: (1) by depreciation of the currencies, which made imports roughly twice as expensive as before; and (2) by reductions in central government expenditure which resulted in rising costs of living and cuts of social expenditures for the population.

All countries affected by the crisis had been forced to reassess their ability to pay for recent arms purchases. On the surface, the depreciation seemed to make further arms purchases impossible in the near future. The financial crisis had in particular a notable impact on submarine construction and other major purchases in the region: Thailand (looking for two- or three submarines) and Indonesia (previously planned to expand its two-boat flotilla) suspended indefinitely their long-planned submarine procurement programmes and postponed them into the next century; Malaysia's plans too, became less likely in the foreseeable future; South Korea, relying on a \$55 billion rescue package from the IMF, was not able to pursue its programmes as scheduled with larger, bluewater-capable boats with air-independent propulsion (AIP). It was expected that it would be postponed at least by several years.²⁸

However, a closer analysis reveals a very different picture when comparing the extent to which the various countries had been affected by the financial crisis: The crisis had not hit the region uniformly. In this regard, it is important to note that some East Asian states such as Taiwan, China, Singapore and Brunei were either not affected, or only marginally affected by the crisis. Singapore announced that the currency crisis would not slow down its modernisation programme. It reassured defence manufacturers that this region would remain one of the most lucrative markets in the world. Thailand, Malaysia, Indonesia and the Philippines, by contrast, had either slowed down the pace of their modernisation programmes or in some cases even suspended major arms purchases (i.e. Thailand, Indonesia). Thus far, the crisis had the greatest impact (in regard to cuts of arms acquisitions) on South Korea, Indonesia and Thailand (see *Table 5 below*).

Despite some very deep cuts in the defence budgets of South Korea, Thailand, Indonesia and more moderate ones in Malaysia and the Philippines (whose modernisation programme was halted for economic

Table 5: Major Programme Casualties and Effects of East Asia's Financial Crisis at a Glance (until the early summer of 1998)

Country	Cancellation and Delays	Defence Budgets Cuts/Remarks
South Korea	<ul style="list-style-type: none"> • Delay of 220 weapon projects including purchases of (1) four US-made early warning aircraft through 2003; (2) construction of three 1,500-ton submarines and (3) three advanced destroyers as well as (4) of C-17 airlift transporters; • Scale down of production of short-range missiles ('Chonma'), MLRS and other arms projects; • Delay of local development and production of 94 advanced KTX-2 jet trainers; • Other austerity measures likely to affect South Korea's armed forces such as slowing down oversea training, cuts in fuel and ammunition, scale down of training exercises and cutting back on barracks maintenance; 	<ul style="list-style-type: none"> • Defence budget cuts in purchasing power are about 1.35 billion won (around 9% of the total budget of 14.03 trillion won or \$9 billion); • The real budget has been cut by almost 30 per cent;
Philippines	<ul style="list-style-type: none"> • Scale-back of original procurement plans to acquire 12-24 multi-role fighters and additional maritime patrol aircraft along with air-defence radar as well as of a dozen patrol boats; however, the government selected in April 1998 14 international defence groups to submit offers for a contract to purchase three off shore patrol vessels and 13 multi-role combat aircraft; 	<ul style="list-style-type: none"> • \$2 billion had been allocated for the five years of a \$13 billion, 15 year modernisation program;
Malaysia	<ul style="list-style-type: none"> • Modernisation programme will be slowed and delayed; • Plans to spend \$500 million. for new weapon procurement (including to create a submarine force and 	<ul style="list-style-type: none"> • Cuts in 1998 defence spending of \$83 million (10% of the defence allocation); an additional cut of 8% is being studied (given the decline in exchange rate, the

Cont'd ...

	8 CSH-2 <i>Rooivalk</i> attack helicopters); • Cuts in major civil engineering and defence structure programmes;	Defence budget might be reduced <i>de facto</i> by 21 per cent);
Indonesia	• Cancellation of 12 Russian-made SU-30K fighters and 8 Mi-17V Helicopters ("postponed indefinitely"); • Cancellation of 5 German second-hand submarines ("postponed indefinitely");	• The real defence budget has been slashed by 40 per cent or more; • Major cuts in arms purchases; • Cuts in the number of military attachés posted abroad; curtailing of expenditures for training and exercises;
Thailand	• Cancellation of eight US-made F/A-18 C/D fighters; delayed by three years to 2003; • Additional delay of payments on \$550 million worth of other arms purchases announced; • The purchase of a US\$1-billion <i>Star of Siam</i> satellite to monitor Thailand's borders; • The navy's plans for two conventional submarines; • Flight training and joint exercises cut by 70 per cent;	• F/A-18C/Ds were ordered in 1996 for \$392 million (no further breach-of-contract penalty costs for the cancellation of F/A-18C/Ds); • Defence budget for 1998 reduced from \$1.04 billion to \$800 million (35 per cent of the original budget in real terms);

Source: *F.Umbach, 'Financial Crisis Slows But Fails to Halt East Asian Arms Race - Part One', Jane's Intelligence Review (JIR), August 1998, pp. 23-27, here p. 26.*

and political reasons already prior to the outbreak of the economic crisis), whereas Singapore, Brunei (Taiwan and China, by contrast, had further increased their defence budgets) had been only marginally affected by the financial and economic crisis in East Asia. Most of the regional procurement plans had been slowed down, delayed and postponed rather than completely and definitely suspended. The reasons that the modernisation processes and the arms build-up in East Asia had not been halted - which had been confirmed by Sipri's and other analyses²⁹ - have been because of the need to find in long-term security policies, industrial considerations and macroeconomic policies on both sides - arms suppliers and arms recipients:

- (1) *China's Military Modernisation*: Despite - or because - of the financial crisis in East Asia, the pace of China's military reforms and modernisation efforts was and is still casting a shadow over the equipment plans of other countries. Perceptions of an emerging Chinese blue-water navy in East Asia that will stretch China's maritime interests beyond the East and South China Sea, the ongoing development of two all-new fighters - the *J-12* long-range multi-role fighter (*F-15*-like; enter service by in 2015) and the *J-10* (*F-16*-like with technological support of Israel; enter service until about 2005) and other major procurement plans - a major streamlining of its aerospace industry and restructuring of its armed forces under way towards future information-warfare and a chain-of-command modelled along US lines (based on a military strategy of '*active defence*') as well as the building of its first satellite ground station with military implications outside China on *Kiribati's* main atoll *Tarawa* have contributed to a looming China threat that might come true for its neighbours much earlier than assumed before the outbreak of the crisis³⁰, albeit for the time being it is more a matter of perception than reality. Whereas other East Asian states are cutting their defence budgets, China's defence budget in 1998 and 1999 enjoyed a 10th year of double-digit growth, compounded by significant cuts in troop strength that were announced in 1997. The defence budget has increased again by 12.9 per cent to US\$10.99 billion in 1998-99. However, China might be confronted with its own socio-economic crisis in the near future that could force Beijing to slow down its military spending and to scale back its ambitious modernisation efforts significantly and earlier than it is currently assumed by China's military elite.
- (2) *Long-term Security and Military Interests of the United States*: The countries hardest hit by the crisis are among the most vital allies of the United States. In this regard - and for the first time-, the Clinton administration cancelled a foreign military sales contract with Thailand at its own expense. Symptomatically for Washington, long-term security concerns and policies are why it had been training Indonesian military forces since 1992 under a little-known US\$10 million DoD programme called *Combined Exchange and Training* (that includes training for psychological warfare and urban combat techniques) despite a congressional ban intended to curb human rights abuses as it was revealed in March 1998. During a trip to Malaysia, Indonesia, Singapore, Thailand, China, Japan, and South Korea in 1998, US

Defence Secretary *William Cohen* discussed the implications of the crisis and the need for these countries to balance their military and economic interests. He expressed concerns, for instance, about South's intention to cut the defence budget, fearing that the Congress would be less willing to support Korea if Seoul cut its defence budget.

In the view of the US defence ministry, the purchase of US defence systems such as the *Patriot* surface-to-air-missile system was seen as vital to maintaining regional interoperability between US armed forces and those of its allies in the region. Therefore, it is interested to work with customer countries in Asia in order to adjust payment and delivery schedules to keep current programs solvent and to provide for sustainment, maintenance and military-to-military relationships required for coalition warfare. The US, for example, helped the Thai military with a training and exercise programme under a broad economic aid package with an overall value of \$1.7 billion announced in Washington in March 1998. In return, the US received '*unrestricted movement*' in Thailand's regional waters.

However, resentment of latent anti-Americanism in East Asia - the consequence of the widespread perception in Asia-Pacific that the US is using the crisis as leverage to force countries to open up previously closed markets - also complicated the efforts of the United States to accomplish its long-term security policies and short-term adjustment strategies to bolster the defence capabilities of its major allies in the region. In the US as well as in East Asia, the crisis had been perceived as a 'litmus test' for Washington's bilateral relations with its allies in the region. As a preventive strategy, although most of these discussions started long before the outbreak of the Asian financial and economic crisis, the US consolidated its bilateral defence ties with Thailand, the Philippines, Singapore and Indonesia during the last three years.

- (3) *Other Vital US Interests in the region:* However, the US crisis management was not only related to long-term security concerns. It was also driven by industrial interests and wider political reasons. Thus the cancellation of purchases of US weaponry could increase the US trade deficit that would make it more difficult for the Clinton administration to persuade Congress to give the President more leeway in concluding free-trade agreements with Asian countries. Furthermore, the crisis undermined Pentagon efforts to get its Asian

allies to pay more for their own defence. Asian purchases of US weaponry had increased from 10 per cent a decade ago to about 25 per cent in 1997. These arms deliveries to East Asia and elsewhere lowered per-unit prices of aircraft and other major weapon systems for the US' own purchases, with production costs rising due to the smaller numbers of total weapon systems sold abroad. In this light, the US armed forces also had a financial interest in helping to salvage weapon purchases quite apart from its wider security and military interests in the region. That explains why the US DoD was interested in helping and supporting these countries by either stretching out deliveries or finding alternative methods of payment. The US had to take care of its standing in the region, ensuring that its East Asian allies perceive it as a reliable, flexible supplier, particularly in times of crisis.

- (4) *The Interests of Suppliers and Buyers:* Declining global defence expenditures, large overcapacities and a shrinking global arms market at the end of the Cold War created a '*buyer's market*' in the 1990s that has given recipient countries new opportunities and flexibility to shop around for the best arms deals (often including transfers of technology and know-how) and playing one supplier off against another. Consequently, the supply side of the equation has resorted to all kinds of marketing and discounting devices, including, if necessary, extensive technology transfer arrangements (often part of offset agreements), as well as barters and even bribes. At the same time, during a global defence industry reconfiguration, many East Asian countries have gradually shifted their procurement policies from the initial import of large numbers of completed weapon systems to the local assembly and production of major weaponry through licences, joint venture agreements and technology transfers. Hence, Asian customers are no longer interested just in the final products, but rather more interested in comprehensive packages, involving collaboration with local industry, technology transfer, creative financial arrangements and creation of jobs in their countries. This explains why customers are more and more interested in long-term partnerships ('*lifetime marriages*') with suppliers that provide solutions to larger overall national requirements, possibly extending beyond defence it-

itself. The slowing of East Asia's military spending and arms build-up has increased further the competition between American, European and Russian arms makers and suppliers in sustaining sales in the only growing arms market in the world besides the Middle East. This increasing competition could result in further '*dumping*' prices of sophisticated state-of-the-art weapon systems and an even further technology transfers to the region (as Russia's modified arms export policy to the Asia-Pacific region has indicated).³¹

To sum up, the overall impacts of the Asian crisis and regional defence recession on Southeast Asia's specific modernisation and procurement efforts, seems to be - despite multiple cutbacks - relatively small, partly because of the absence of major orders (such as Taiwan's purchase of 150 *F-16s* in the early 1990s). In Northeast Asia, South Korea's major cuts in the procurement budget has delayed and slowed down but not definitely stopped the modernisation programmes.

Most of the US and European civilian aircraft manufactures believed that Asian markets promise long-term potential (because of business and tourist travel expansion) even though the regional crisis had led some companies to cancel or delay some orders. A protracted crisis, however, would force countries like Indonesia to rethink the basic scale of their development; state-of-the-art weapon systems will continue to be in demand but will be less affordable. Western defence contractors also saw the financial and economic crisis only as temporary phenomenon, whereas nations' defence and security are long-term issues. The East Asian nations were consequently adopting a '*wait and see*'-attitude to determine the depth and breadth of the recession. Furthermore, France was eager to lift the EU weapons embargo on China in an effort to sell its advanced military technology. But even with the embargo, Europe's main arms suppliers gradually stepped up their military contacts with China (the sale of certain technologies and specific equipment, such as radar surveillance systems,- was allowed).

Thus, the data already available in 1998 indicated that limited procurement of new weaponry will continue in most countries, but on a more prioritised basis according to their funding availability and their specific threat perceptions.

New trends of modernisation and increased defence spending

Meanwhile, the defence market in East Asia seems already stabilised after the economic downturns in 1997 and 1998. Although the Asian economic crisis has thinned out the regional aerospace industries, as some companies shut down their production capacity, while others are beginning to merge or close shop altogether, a devaluation of the regional currencies and heightened competition have made Asia a much cheaper and therefore more interesting place for future manufacturing. Hence the crisis might eventually lead to the surprising effect of East Asia's aerospace industries expanding their role as a parts and services supplier to the West's large aircraft industries.³²

Moreover, some of the strategic trends to reduce the defence budgets and scale down procurement programmes have already been reversed in 1999:

- *South Korea:* While Seoul announced in the spring of 1998 to postpone or to spread 220 weapon programmes, it has proclaimed in February 1999 to initiate major weapon purchases within a total of \$69.3 billion on defence spending between 2000 and 2004. These procurement programmes will include three *KDX* indigenous destroyers, 60 *F-X* fighters, new attack helicopters and UAV. Only its former plans to acquire *AEW* aircraft are still deferred until 2004.³³ In May 1999, the government confirmed to build 20 additional *F-16C/D* combat aircraft for an estimated 800 billion won (\$663) to supplement 120 *F-16s* built under license by *Samsung Aerospace Industries*. The procurement decision, however, has primarily been made due to economic reasons (to ease the strain on South Korea's troubled economy, i.e. to bolster the local aerospace industry) rather than for any concrete short-term defence needs. Consequently, the programme funding for the additional aircraft will not affect the defence budget.³⁴
- *Thailand:* The Royal Thai Air Force, unable to resume the purchase of new *F/A-18* combat aircraft from the US, meanwhile, has bought 25 second-hand *Alpha-Jets* from Germany (originally it wanted 50 planes to buy) in 1999 and is now in the process of acquiring 16 US-used *F-16A/Bs* (which will be modernised to *F-16Ds*, eventually even been armed with *AMRAAM*-missiles) from the US Air Force.³⁵

- *Malaysia* has signed a contract for the design, construction and delivery of the first six of a planned fleet of 27 *New-Generation Patrol Vessels (NGPVs)*³⁶ and has begun contract negotiations for up to six UK-built *Super Lynx* naval helicopters, estimated RM700 million (US-\$158). It also expects to take delivery of the two 2,270-ton *Yarrow-class* frigates from Britain at the end of this year. Both frigates are armed with *Exocet* ship-to ship-missiles. Furthermore, it has now reactivated its former plans to build up a submarine fleet. It has already begun plans for a series of Shallow Underwater Attack Submarines armed with two torpedo tubes and capable of carrying small underwater demolition teams. These new submarines will also be equipped with Air Independent Propulsion systems which will allow much longer underwater operations. Reportedly, Russia is interested to sell its *636-Kilo-class* submarines to Malaysia.
- *Singapore* has confirmed it will buy eight *AH-64D Apache Longbow* attack helicopters (the first country to do so in Southeast Asia), with deliveries expected to begin from about 2002.³⁷
- *The Philippines*: Its military expects to finalize the contract to acquire a new combat aircraft at the end of the year, after selecting six companies to bid for the new fighter aircraft to replace its ten *Northrop Grumman F-5A/B/Es*. In the meantime, it will boost its *F-5A* inventory by procuring additional five *F-5s* from South Korea.³⁸ Given the devaluation of its currency, the Philippine government has slowed down its ambitious 15-year modernisation programme (1995-2010) by concentrating on upgrading its weaponry and command, control, communication and intelligence systems (C³I).³⁹ But military modernisation programme remains a subject of ongoing dispute due to a lack of funds and complex bureaucratic procedures. President Estrada has relaunched the programme with an initial investment of only six billion pesos (US\$ 157.9 million). Nonetheless, Manila is considering acquiring *Perry-class* and *Knox-class* frigates in the framework of transfers on a grant basis. The frigates in question would be the largest ships ever deployed by the Philippines navy.⁴⁰
- *Vietnam*: is considering acquiring additional 24 *SU-24/-27* air superiority/ground attack combat aircraft from Russia in order to supplement 12 already acquired.⁴¹
- *China*: China's defence budget of 2000 has increased again by 12.7 percent in the 12th consecutive year of double-digit growth whereas its economic growth rate went down to just 7 percent in 1999. Last year,

the defence budget rose officially by 15 percent. However, as a consequence of the Kosovo conflict and the unfortunate bombing of the Chinese embassy in Belgrad, China seems to have increased its defence budget. In May 1999, the State Council reportedly diverted *Rmb* 20 billion from large infrastructure projects to the defence budget. Until 2003, a total of *Rmb*100 billion will be allotted. Another *Rmb* 80 billion had been mobilized to enhance the fighting ability of China's armed forces, including high-tech conventional weapons and strategic as well as tactical nuclear weapons and second-strike capabilities. With these additions to the official defence budget of 1999, the actual total one reached *Rmb* 215,2 billion at the end of that year – almost double the size of the original budget (*Rmb* 115,2 billion) according to Hong Kong.⁴²

Against this background, China is presently in negotiations with Russia to buy another 40 *SU-30MKK* fighters to supplement its order for 40-60 *SU-30MKK* aircraft last August. It will also receive around 100 *AA-12 'Adder'* medium-range air-to-air missiles, which are equivalent with the most modern US-made *AIM-120 'AMRAAM'* missile.⁴³ It also seeks to acquire two or three upgraded '*Kilo*'-class submarines and two or three more *Sovremenniy*-class destroyers.⁴⁴ Furthermore, Russia seems to have sold the "*Kiev*" heavy aircraft carrier.⁴⁵ However, \$1 billion is needed to put the carrier to sea and many years to train a crew. But this development will certainly catch the attention of both regional and global players. In addition, China seems close to deploying an anti-aircraft defence system that uses technology it can track even *Stealth*-type warplanes.⁴⁶ China is also building two more *Jiangwei II*-class guided missile frigates.⁴⁷ In last January, it launched a military communication satellite that is a major component of the first integrated *C⁴I* system.⁴⁸ A planned Russian sale of two *Typhoon*-class nuclear submarines carrying ballistic missiles, however, has been denied.⁴⁹ Furthermore, China made faster progress in the development of nuclear-armed long-range cruise missiles than previously expected by Western experts.⁵⁰ The PLA has given the development of land-attack cruise missiles (LACM) high priority in particular for medium to long range strike missions.

Reportedly, some 100 joint Chinese-Russian research and development projects are under way and more than 2.000 Russian technical experts are assumed to be working in China in order to upgrade and modernise China's nuclear armed forces. Moreover, a

Russian article of August 1997 reported that both sides have agreed even to work out an automatic command and control system (C²) for China's strategic nuclear forces.⁵¹ But such a system is not necessarily inexpedient for a nuclear power with less than 300 strategic nuclear warheads. Is this another indicator for China's ambitions not only to modernise its nuclear forces but also to increase its numbers of missiles and warheads?

Implications for the military balance in East Asia

To analyse the present military balance in East Asia - in particular for the Korean peninsula, the Taiwan Strait and the South China Sea - it is necessary to take into account the wider political conditions and prerequisites of the specific '*hotspots*' in East Asia. Before I analyse these '*hotspots*', I will review China's often neglected ambitious nuclear modernisation which will sooner or later deeply influence not only the security perceptions of the regional states and external powers but also changing the global balance of power.

Regional and global military balance - The impact of China's nuclear modernisation efforts⁵²

China's ambitious programmes of modernisation of its nuclear forces, including of its IRBMs '*to provide strategic dominance over East Asia*' (Richard Fisher⁵³), seem to be another proof of the future shifts of the military balance in the region because they seem mainly proactively doctrine-driven (a departure from the PLA's past rather reactive practice). They demand further changes in the PLA's force structure, strategy and concepts of operation. Given Western estimations of China's current fissile material stock, after acquiring the MIRV⁵⁴ technology China can expand its nuclear forces two or three times its present size (from 300 to 600-900 warheads).⁵⁵

Despite facing tremendous problems such as insufficient funds in modernising its armed forces - although even the official military budget has increased by approximately 33-40 per cent in real terms over the past five years - and the low level of its military technology base, numerous development programmes of its nuclear forces are under way. In contrast to the United States and Russia, the modernisation and

expansion of China's nuclear and conventional armed forces have not been directly constrained by any international arms control regimes such as *START* or the *INF*-treaty. At the same time, uncertainty about these Chinese modernisation programmes and Beijing's long-term strategic intentions behind those military programs under way arise primarily from the lack of transparency in its military sphere.

The focus on improving the qualitative level of China's nuclear forces with the help of recruited former Soviet weapon scientists and engineers is directed toward a miniaturising of warheads, better targeting accuracy, penetration and anti-electronic interference capability, modernising its C²-networks, developing a *MIRV* capability as well as increasing the survivability and the camouflage of its nuclear forces such as storing them underground and deploying on mobile, land-based launchers or submarines.⁵⁶ The PLA navy is currently working on a new advanced nuclear submarine that will carry 12 SLBMs and will be deployed in the next decade. As part of the programme, this new type of a nuclear submarine will be equipped with a new SLBM, called *Jiulong-2* (CCS-NX-4), with a range of 8,000 km. It will allow Chinese submarines for the first time to target parts of the US from areas located near the Chinese coast.⁵⁷

Western experts anticipate that China will deploy 4-6 submarines, each armed with 12 SLBMs. That would add alone 48-72 warheads to China's nuclear arsenal, with even more, if China can succeed with its *MIRV* development (expanding the number of warheads on the SLBMs at least two or three times).⁵⁸ A new mobile, solid-fuel ICBM, named *Dongfeng-31* (DF-31), was tested by China at the end of May 1995, few days after the indefinite extension of the *NPT*, and in August 1999. It also has a range of 8,000 km and can carry a payload of 200-300 Kt. The new ICBM is expected to be operable until the end of this year.⁵⁹ Another solid-fuel mobile ICBM (DF-41) under development will have a range of 12,000 km and is anticipated to become operational before 2005-2010.⁶⁰

Furthermore, China is also developing ground- and air-launched, land-attack cruise missiles, partly from versions of its turbojet powered *C-802* anti-ship missile. Reportedly, this cruise missile with a range of at least 120 km, carrying a payload of 165 kg, will incorporate a highly accurate *Global Positioning System* (GPS) guidance system and a terrain contour-matching radar to improve the accuracy required to perform precision-strikes against high-value civilian and military targets such as command and control centres or government buildings in Taipei.⁶¹ This and other future cruise missiles (which have been developed much faster than anti-

cipated)⁶² with their low altitudes will present a major detection challenge for future *Theatre Missile Defence* (TMD) radar and for effective counter measures. A report to the US Congress already warned in 1997: 'A missile fleet of this size could overwhelm any theatre missile defence capability planned for this vital region and fundamentally alter regional calculations of the balance of power.'⁶³

However, China presently still lacks an adequate limited nuclear war-fighting posture with a satellite based early-warning (EW) capability and sufficient counterforce as well as countervalue tactical, theatre and strategic nuclear forces to deter the escalation of conventional or nuclear war. But it is also clear that China is going to close this '*window of opportunity*' - the gap between its operational requirements of the limited deterrence strategy and its nuclear doctrine assumptions - for its perceived potential adversaries. This is because China's strategists have concluded that Beijing's deterrent is uncertain or even frail and thus not credible enough. It leads to a greater Chinese interest in launch-on-warning or launch-under-early attack postures and hence pre-emptive nuclear strategies⁶⁴ that ultimately will undermine crisis stability.

In the view of China, an effective TMD-option of the United States and its allies Japan, South Korea and Taiwan against China's nuclear ballistic missiles would not only question its nuclear deterrence against those potential aggressors but also dramatically increase the US ability to launch a disarming first strike against China. Consequently, China is - like Russia - essentially interested in the endorsement of the principles behind the ABM-treaty.⁶⁵ Although Beijing's objections against TMD-systems in its three neighbouring countries are to some extent understandable, most of China's argumentations are not very convincing and persuasive if they are analysed more in detail.⁶⁶

While the assumption that China will be able to close the gap between the nuclear doctrine and its operational requirements as well as capabilities over the next decade remains uncertain, China's nuclear strength will nonetheless increase as the consequence of the international de-nuclearisation of the nuclear superpowers United States and Russia. By implementing START-II, both arsenals will be downsized to 3-3,500 warheads. Consequently, the combined nuclear arsenal of both superpowers to Chinese strategic nuclear forces would fall from 70:1 to 7:1, or 3.5:1 compared with one of the nuclear superpowers (see *also the Table 6*).⁶⁷ Forthcoming START-III negotiations between the US and Russian side will further reduce their arsenals to expected 2,000-2,500

Table 6: China's present nuclear arsenal vis-à-vis the four original nuclear weapon states

Strategic Nuclear Weapons of the Original 'Nuclear Five' (1999)			
Country	<i>Suspected strategic nuclear weapons</i>	<i>Suspected non-strategic nuclear weapons</i>	<i>Suspected total nuclear weapons</i>
China	284	150	434
France	482	0	482
Russia	7,200	6,000-13,000	13,200-20,000
UK	100	100	200
USA	8,500	7,000	15,500

Source: Ehsan Ahrari, 'China Eyes NATO's Nuclear Doctrine', in: *Jane's Intelligence Review (JIR)*, April 1999, p. 38 f., here p. 39.

nuclear warheads on each side or even lower (in the case of Russia) by the end of 2007. A potential Chinese nuclear arsenal of some 600-900 warheads in the future would then automatically not only raise China's global political prestige but also the scope of its regional nuclear and conventional military options in the Asia-Pacific region (including towards the United States).

Moreover, one has to take into account that China has, in contrast to the United, no security commitments requiring a credible extended deterrence posture that justifies high numbers of warheads. However, it might help to explain another trend of China's discussions of military doctrine - the increasing linkage between the PLA's conventional and nuclear options.⁶⁸ With a secure northern border towards Russia, China's military strategy has now shifted its attention from the more general peripheral defence of the country to concrete maritime defence in order to guarantee militarily its officially claimed economic zones and territorial sovereignty in the South China Sea and increased military options toward Taiwan.⁶⁹ Against this background, China's increasing nuclear retaliatory capability might primarily function to prevent great power interference in local and limited conventional wars under high-tech conditions with small and medium powers such as those in the South China Sea. A credible nuclear deterrence option that guarantees nuclear escalation and its control similar to Nato's flexible response strategy of the 1980s requires thus both the qualitative modernisation and quantitative increase of China's nuclear arsenal *vis-à-vis* the United States and Russia.

Although the most dramatic improvements of China's armed forces are indeed taking place in its strategic and theatre nuclear force modernisation, its future capabilities might be constrained at least to some extent by China's adherence to the *CTBT*, a fissile material cut-off, the possibility to deploy *Ballistic Missile Defence (BMD)* or *Theatre Missile Defence (TMD)* systems in Japan, South Korea, Taiwan and possible *START-IV* negotiations between all five nuclear powers.⁷⁰ Critical technological limitations such as computer capabilities for satellite-linked *C³I* or increasing the number, accuracy and survivability of delivery means might also constrain an unlimited modernisation program of its nuclear forces. However, as analysis of China's military exercises and missile tests⁷¹ as well as revelations of exporting 46 powerful US supercomputers to the *Chinese Academy of Sciences*⁷² (which could be used for the testing of nuclear warheads) have shown during the last years, those technical constraints might not be the major barrier against the modernisation programs for China's nuclear armed forces. Relaxed US export control for sensitive dual-use technologies could indeed help China to build stealthier and longer range cruise and ballistic missiles with a much greater accuracy⁷³ as the controversial *Cox-Report* has indicated.⁷⁴

The Korean Peninsula

Although Pyongyang continues to observe the October 1994 Agreed Framework and a moratorium on missile launches as it negotiates with the US, South Korea and Japan, it has also continued its missile development short of test launches (indeed, it has only suspended testing of long-range ballistic missiles). Moreover, it has been selling missiles as well as missile technology to customers around the globe. In the absence of comprehensive inspection procedures, other countries cannot be confident that North Korea has stopped working on the development of nuclear, biological and chemical weapons. Its missiles are capable of striking Japan and the US and inflicting even greater damage on South Korea. Their development has security implications for South Asia and even for Europe.⁷⁵

North Korea's nuclear and missile blackmail strategies, including refusing to allow international inspectors full access to its nuclear sites,⁷⁶ the launch of a *Taepo-Dong-I* on 31 August 1998,⁷⁷ and revelations of a vast underground facility under construction which US intelligence sources identified as the site of a reactor or reprocessing plant⁷⁸ led to

calls for a comprehensive re-evaluation of US policies towards North Korea.⁷⁹ Pyongyang's policies of blackmail, by undermining the October 1994 Agreed Framework, have called into question the entire *Kedo*-process for the freezing of the DPRK's plutonium programme.

Given that North Korea views its missile capability as its last trump card when trying to entice Washington into negotiations over the withdrawal of US forces from South Korea, future prospects of the *Agreed Framework* at first glance appear to be rather poor. Furthermore, the DPRK is believed to have produced sufficient plutonium to construct 2-6 bombs.⁸⁰ With continued submarine and special forces incursions into the South, ongoing tunnelling under the *Demilitarised Zone (DMZ)*, and preparations for new missile tests under way since late 1998,⁸¹ the present situation on the Korean peninsula seems just as tense as it was before the signing of the *Agreed Framework*.

Against this background, a growing number of US experts and politicians called for a fundamental diplomatic review in a broader context of arms control measures to be applied to the Korean peninsula.⁸² Even those experts who still favoured continuing with, rather than abandoning the *Agreed Framework*, argued in favour of a '*new deal*' incorporating '*new issues of concern by supplementing it (the Agreed Framework) with new and more comprehensive commitments*' because it could otherwise be impossible to save it.⁸³ What is indeed lacking in US policies towards North Korea is a comprehensive, long-term strategy that creates a common framework for *Agreed Framework/KEDO* issues, US-DPRK missile talks, and related initiatives.⁸⁴

While North Korea's missile exports and transfers of missile technology so far have not had direct security implications for Japan, its missile test of August 1998 fundamentally changed Japan's short-term security perceptions and defence policies with implications for the US-Japan alliance and the relationship between Japan and China.

Although the May 1999 *Kumchang-ri*⁸⁵ inspection by fifteen US experts under the direction of former secretary of defence Dr. *William Perry* did not produce evidence for the previous or intended production of weapons-grade plutonium or reprocessing activities,⁸⁶ the site could support such facilities in the future if substantially modified. Moreover, a considerable part of North Korea's earlier nuclear programme and many nuclear facilities have remained unmonitored since the signing of the *Agreed Framework* in October 1994. Therefore, until follow-up visits to *Kumchang-ri*, scheduled for May 2000, any definite conclusions cannot be reached.

Following the June 1999 naval clash between South and North Korean vessels in the *Yellow Sea*, during which South Korea sunk at least one North Korean ship⁸⁷, observers expected the launch of another long-range *Taepo-Dong 2* ballistic missile to serve as a '*force multiplier*' on September 9, 1999 marking the 51st anniversary of the Communist government. From Pyongyang's point of view, the test would have demonstrated the DPRK's determination and capability to offset South Korea's increasing lead in conventional military technologies. Furthermore, North Korea was building an underground missile base – from which *Taepo-Dong-1* and –2s could be fired – in the mountainous area of *Youngjeo-dong*, just 20 kms from its border with China, a site that had probably been chosen to avoid pre-emptive strikes by US cruise missiles.⁸⁸ In sum, North Korea seems unwilling and unable to bargain away its only remaining trump card, namely, its ballistic missiles. Ultimately, missile development cannot be divorced from the goal of sustaining the DPRK's political system and regime. Therefore, US and Western *comprehensive engagement* strategies can hardly succeed – whether they assume the guise of the 1994 *Agreed Framework* or that of any other attempt at conditioning.

North Korea's armed forces are facing tremendous difficulties as the result of the socio-economic crisis. But its military capabilities seems still formidable and have also been strengthened during the last years. According to South Korean sources, Pyongyang has also increased its stockpiles of food and oil for its armed forces and has introduced new weapons systems in its ground, air and navy forces.⁸⁹ Moreover, South Korea has currently no adequate defence capabilities to counter North Korea's missile threat. It possesses only six *Patriot* missile batteries which are deployed only in the south to defend rear-area US bases. Through the current economic and financial crisis has slowed down the modernisation of its armed forces it will not have an impact on the military balance on the Korean Peninsula given the economic problems of North Korea and the continued presence of the US armed forces on the South Korean soil. Moreover, to enhance its operational capability to ABC-warfare, North Korea has created chemical warfare platoons at the regiment level. With its eight factories to produce chemical weapons and other facilities for producing biological weapons⁹⁰, North Korea is able to conduct simultaneous chemical and biological attacks on both the front and rear of South Korea with various delivery systems such as artillery, multirocket launchers and *Scud*-missiles as well as aircraft.⁹¹

Nonetheless, during the 1990s, the overall balance of power on the

peninsula has decisively shifted in South Korea's favour with North Korea's economy hovering on the brink of collapse. With the weakening of North Korea's former relative strength, Pyongyang's, its sense of insecurity has been getting stronger. Under such circumstances, it has sought to develop nuclear and missile capabilities to guarantee its military and political survival. It may try to speed up its missile development to enhance its deterrent capability – particularly after having experienced Nato's intervention in Kosovo. At the same time, a political collapse of the Pyongyang regime is not imminent.

It remains to be seen whether Pyongyang's new diplomatic activism⁹² will have lasting positive implications for security in North East Asia. Pyongyang's main interest is in foreign aid and investment, but the above-mentioned activities could also reflect a steady increase in self-confidence within the North Korean regime as the country's protracted famine shows signs of some easing.⁹³ Even more important for the future – as the talks on rice aid and the flood relief have shown, since 1995 – the North Korean leadership fears nothing more than the opening up of its society to the international community⁹⁴, one of the most important prerequisites for all '*soft-landing*' strategies and more far-reaching confidence-building measures.

Against this wider background, speculating about a possible US pullout following reunifications would not only be premature but would send the wrong signal at the wrong time. However, Seoul is in a difficult position. On the one hand, South Korea must rely on American forces to deter potential North Korean attacks. On the other hand, these forces' very presence could increase the likelihood of conflict, and, simultaneously, undermine or at least compromise the successes of '*sunshine diplomacy*' – a strategy of constructive engagement and gradual peaceful reunification with North Korea through the promotion of peace, reconciliation, and cooperation. Therefore, incremental South Korean shifts away from dependence on the US remains possible, particularly with China pressuring Washington by playing the '*North Korean Card*'. A complete US troop withdrawal, however, would not only have important security implications for the Korean peninsula, but for Northeast Asia as a whole. As a consequence, discussions such as the one recently stimulated by the South Korean Defence Ministry with a view to justifying higher defence budgets are in many respects counterproductive and short-sighted (in this context, unified Germany can be viewed as a positive example for a troop reduction short of a complete US withdrawal).

Taiwan - China:

The conflict in the Taiwan Strait seems presently to have replaced the Korean Peninsula as the most dangerous flashpoint in the Asia-Pacific. In the light of the continual modernisation efforts and procurement acquisitions of state-of-the art weaponry from Russia, the military balance in East Asia might step by step change at the expense of Taiwan in the next decade. Recently-increased tension between China and Taiwan in the run-up to Taiwan's 18 March 2000 presidential elections have once again emphasized one of the region's major security risks.⁹⁵ In contrast to its response to the 1996 presidential elections, however, Beijing chose to use words to impress Taiwanese candidates and voters, rather than missile tests and large-scale manoeuvres in the waters surrounding the island republic.

China's '*White Paper*' on Taiwan, issued on February 21, 2000,⁹⁶ and meant to intimidate Taiwanese voters, was confusing for foreign observers but could be interpreted as a compromise between hard-line and soft-line factions. On the one hand, the paper sent a clear message: China would attack Taiwan if the island declared independence, or if it was occupied by a foreign power or China would establish a new linkage, if Taiwan indefinitely refused to enter into negotiations on reunification. On the other hand, however, Beijing appeared to agree to one of Taipei's main conditions for political talks with China, namely, that the island be treated as an equal and not as a '*local government*'. The White Paper mentions this principle of equality no less than five times. Overall, however, the policy paper would appear to signal an increasing PRC impatience. Indeed, President Jiang Zemin has repeatedly said that he intends to make reunification of the motherland his own legacy. From such a perspective, a resolution of the Taiwan issue would have to be brought about by the time the 17th Communist Party Congress convenes in 2007, when Jiang Zemin will be 81 and retire from the political scene.⁹⁷

At the same time, the PLA – that has already acquired unprecedented capacity for influencing the policy-making process⁹⁸ and that could be the biggest winner from increased tension with Taipei⁹⁹ – has been asked to '*actively prepare*' for war with Taiwan. In an internal document sent by CPC's Central Military Commission to all regional commanders, Beijing warns of an '*increased possibility for a military solution*', should nonviolent means fail to accelerate the absorption of Taiwan. The document envisions a blitzkrieg-like offensive opened with a first fatal strike so that

that '*the Taiwan forces have no way to organize effective resistance.*' From Beijing and the PLA's points of view, any backlashes on this issue, similar to the proclamation in July 1999 by Taiwan's (former) President Lee Teng-hui's of a '*two-countries theory*' would fuel mainland China's disintegration by encouraging independence for Tibet, Xinjiang and other occupied areas. The White Paper also mentions that it is very unlikely that European countries would come to Taiwan's rescue, but anticipates a US intervention to defend the island against an attack. Interestingly, the document is completely in line with the PLA's interest in '*asymmetric strategies*' of warfare to be used *vis-à-vis* the US. The PLA believes, for example, that such a conflict will not escalate into a nuclear missile exchange, because the US will lose its will to fight and withdraw after suffering serious casualties, while the Chinese side will be able to absorb heavy casualties and prevail.¹⁰⁰ Therefore, China does not require a military equilibrium with the US.

'*Leaner but meaner*' - a term used in the 1980s to describe the RMA underway in the Warsaw Pact armies as the result of the (Marshall) Ogarkov-reforms - has determined the defence policies and structures of East Asian armies during the last decade. China as the world's largest standing army has also announced further cuts of its armed forces (500.000 before 2000 after those of the 1980s and 200.000 in the last two years¹⁰¹) to 2.5 million in 1997. Already since 1985, China's military doctrine has shifted from an early, large-scale and all-encompassing '*people's war*', based on an attrition military strategy, to local and limited wars around China's periphery. These doctrine shifts have also led to an evolving concept of limited nuclear war deterrence¹⁰², resting on a limited nuclear war-fighting capability and denying the adversary victory in a nuclear war.¹⁰³ As a consequence of these new doctrines as well as military strategies, rapid reaction forces and other special units have been formed.¹⁰⁴ Nonetheless, although the PLA will also be in the future the largest armed force in the world, additional financial resources for future high-tech warfare (i.e. electronic and information warfare) and what Chinese defence experts called '*joint warfighting*' - an umbrella phrase under which a multitude of changes in PLA's structures, organization and military doctrine are taking place - have to be mobilised to meet the security demands of tomorrow.¹⁰⁵

While Beijing remained remarkably silent immediately after the Taiwanese elections, a PLA source threatened Taiwan with a two-million-soldier invasion force on 200,000 fishing boats, while adding that nuclear

weapons were a viable option, particularly so if the US interfered.¹⁰⁶ The PRC's supposed interest to return to a more moderate policy can be explained by the fact that its failure to threaten Taiwan into submission may have undermined the CPC's domestic legitimacy. Furthermore, China has benefited considerably from business links with Taiwan.

If present strategic trends continue, however, the military balance in the Taiwan Strait will erode over the next decade.¹⁰⁷ In recent years, the PLA has revised its strategy for a Taiwan contingency.¹⁰⁸ It now hopes to achieve its objectives without fighting a war, by wreaking economic havoc and instigating social unrest in Taiwan. Hence, 'weapons' that target the Taiwanese media, the stockmarket, and the islanders' psyche, have become an important part of China's military thinking on Taiwan. However, and depending on the island's own policies and actions, gradual escalation strategies might still involve missile tests, a sea blockade, combined-force drills, and a military buildup. Such strategies of attrition, based on a 'war of nerves' and designed to undermine the morale of the Taiwan population, could provide the PLA with the best chances to succeed in a major conflict while at the same time preventing a US intervention.¹⁰⁹

Moreover, the 1995/96 missile tests had been quite successful. They escaped Taiwan's early warning and detection radars¹¹⁰ and were much more accurate than American experts had previously expected.¹¹¹ They underscored both the progress the PLA had made in modernizing its missile force and specific military shortcomings on the Taiwanese side; Taiwan was unable to detect the missiles and thus could not have destroyed them. The US remains the lone regional player with sufficient signal intelligence (SIGINT) capability to detect PRC missiles in 'real time'. Taiwan – like Japan and others – is heavily dependent on the US in crucial areas such as real-time information about Chinese troops and missile forces. Without the US information back in 1995/96, Taiwan would neither have known precisely when they were launched and when as well as where they hit their target zones. With the new US-made E-2T reconnaissance and surveillance aircraft, Taiwan had for the first time direct information exchanges with the US E-8 'Joint Stars' reconnaissance aircraft in a war-like operation. Furthermore, the July 1995 and March 1996 missile tests were conducted in conjunction with broad multi-service exercises, in which, in the future, tactical ballistic missiles are going to play an increasingly important role.¹¹² It was one of the major lessons of the crisis 'that the PLA can challenge Taiwan's vital

*interests without direct engagement.*¹¹³ Unsurprisingly, the PLA has also drawn its more painful lessons and will try to fare better next time.

While the PLA currently lacks a credible invasion force and will continue to do so until at least 2005, China has been rapidly increasing its short-range ballistic missile force in numbers as well as in quality.¹¹⁴ At the moment, the PRC is deploying an advanced, longer-range version of the *DF-21*, provisionally called *DF-21X*, with an extended range of 3,000 kms and an improved accuracy.¹¹⁵ Moreover, Beijing plans to launch six satellites before the end of the year which will improve the accuracy of its ballistic missiles and will allow detailed reconnaissance of Taiwan's defence capabilities. At the same time, the PLA has made considerable progress in developing manoeuvrable short-range ballistic missiles with ranges between 300 and 600 kms and has been developing a new generation of land attack cruise missiles to accurately target key Taiwanese military installations with the help of newly acquired dual-use technologies such as the *GPS* and the *Inertial Navigation Guidance System (INS)*.¹¹⁶ These dual-use technologies are widely available on the civilian market. In 1999, China deployed 150-200 *M-11* (range 300 kms) and *M-9* (range 600 kms) short-range ballistic missiles in addition to 30-50 *SRBMs* deployed in 1995-96 in provinces adjacent to the 175-km-wide Taiwan Strait – most of them presumably with improved accuracy, estimated to be 20-30 metres by using *GPS* and *INS* minicomputers which are widely available on the civilian market. Beijing reportedly plans to further increase that number to 650-800 missiles by the year 2005.¹¹⁷ This rearmament is at least partially due to the fact that the PLA – in contrast with China's Foreign Ministry and other civilian ministries – continues to view the controversial missile tests of 1995 and 1996 as a political victory.¹¹⁸ In a few years' time, the Chinese missile build-up could shift the balance of deterrence in favour of mainland China and prompt Beijing to adopt more risky policies vis-à-vis Taiwan.

The creation of Taiwanese *Rapid Reaction Forces (RDFs)* will result in new weaponry procurement such as the purchase of large numbers of new helicopters to transport those new mobile units to the hot spots whilst others are needed for fire support. Taiwan, for instance, has recently detailed plans to acquire around 100 new transport helicopters to equip two air-mobile brigades with a strength of about 6,000 for defence in the Taiwan Strait.¹¹⁹ These plans are part of a revision of Taiwan's contingency planning. While Taiwan's General Staff formerly assumed a full-scale amphibious assault from China, it now considers a series of

Limited attacks, a partial blockade (particularly by submarines), the seizure of offshore islands and the launch of ballistic missiles against the island of Taiwan (as 'test firings' of M-9s missiles, featuring enhanced accuracy, into the seas near Taiwan during military exercises have shown in 1995 and 1996) as the most likely military threats of the PLA. These revisions of Taiwan's contingency planning are the result of its impressive modernisation programs (particularly of its air and naval forces) and the numerous, still existing, shortcomings of the PLA's capability to start a full-scale invasion in the near future.¹²⁰

Taiwan's impressive military modernisation programmes of the 1990s notwithstanding, one may ask whether the island's armed forces will be able to effectively use latest additions to their weaponry, given a lack of force multipliers and adequate military training, low morale, and operational as well as doctrinal shortcomings in both strategy and tactics. Furthermore, the last time that Taiwan's armed forces conducted joint military exercises together with the US was 20 years ago. The extent of intra-operability – technical, doctrinal, as well as operational – and experiences made with joint military operations therefore remains rather limited.

In response to the missile threat, Taipei will deploy three *Patriot* batteries in northern Taiwan to protect the capital city and economic centre. However, these are no watertight shield against every incoming missile.¹²¹ Taiwan is therefore no longer interested in ballistic missile defence alone, but intends to develop and deploy its own offensive ballistic missiles (such as the *Tien-Ma* with a range of 1,000 kms).¹²² Taipei's current modernisation and procurement efforts can be explained by the wish to buy time for the democratisation on mainland China rather than maintaining a military balance.

While reunification with Taiwan remains Beijing's number one political priority, any unprovoked missile attack or invasion of Taiwan would likely produce regional and global instabilities by provoking (1) increased US military supplies to Taiwan or a US military intervention, (2) Taiwan's rejection of reunification and declaration of independence, (3) Japan's rearming and tightening of the US-Japan alliance, and (4) China's own economic and political isolation from the global economy and Western sources of investment.

The present situation will not and cannot last forever. Beijing needs to at least meet Taipei and the new political realities halfway in an attempt to define a new, more stable formula for both its relations with Taiwan and Washington.

Although Taiwan appears ready to enter into negotiations for reunification, it is simply not interested in the kind of outcome that Beijing is seeking. Therefore, negotiations will only transfer both sides' mutually exclusive interests to a higher political level without resolving them. Given Beijing's self-declared time-pressure to finalise those negotiations by 2007, inherent pressures and conflicts can probably only increase. The next three to five years are thus predicted by most US experts to become a period of heightened tensions and potential crisis. Whether, as has been argued, there is a new Beijing '*timetable without time limit*'¹²³, remains to be seen.

The South China Sea and Southeast Asia

These ARF and CSCAP processes since 1993/94 have helped ASEAN to assume the leading role in defining its goals, scope, and processes. Ultimately, however, they remain dependent on the political cohesion and unity of Asean as well as on the stability of the strategic triangle (China, Japan, and USA) in the Asia-Pacific region. Given Asean's ambivalent relations with China and Japan and the unclear triangular relationship among these major three powers in Asia-Pacific, the future process of multilateralisation and institutionalisation in Asia-Pacific remains uncertain, particularly in regard to the efficiency and effectivity of preventive diplomacy, conflict resolution and management. Although these processes will move forward and become even more important, the ARF's and CSCAP's main purpose for the time being seems to lie still in the field of *Confidence and Security Building Measures* (CSBMs as the OSCE/CSCE is doing it in Europe) and broader security discussions rather than becoming a multilateral or even a supranational institution for conflict resolution and management that is rather a long-term task. Hence, realistically speaking, the ARF cannot replace firm security arrangements involving specific bilateral or multilateral defence commitments (such as Nato's in Europe) in the foreseeable future. Those specific defence arrangements in Asia-Pacific are tailored in traditional bilateral defence and security treaties particularly with the United States.

In the mid-term, the security architecture of the Asian-Pacific region will comprise traditional and new bilateral relationships with new intervoven multilateral security arrangements such as the ARF and CSCAP rather than replace the bilateral security ties with the United

States. At the same time, by trading cheap arms in exchange for political support within the ARF on sensitive issues such as territorial conflicts, the US military presence and the Taiwan question, Beijing has driven wedges into the political cohesiveness of Asean. Simultaneously, China's strategic policies serve the expansion of its political influence in South- and Southeast Asia.

The underlying problems and security challenges in Southeast Asia have become even more complicated when one considers the current intra-ASEAN military cooperation. Despite Asean's creation of a regional common sense on security in recent years, those tendencies have not been automatically transferred to a significant greater intra-ASEAN defence cooperation. Bilateral and multilateral defence ties between the member states have certainly been increased, cumulating in numerous bilateral and multilateral military exercises to a mutual benefit. However, Asean's defence cooperation has remained limited to the level of coping with low intensity threats such as piracy and smuggling. Exchanges of military intelligence, for instance, function only at the level of counter-insurgency operations. Defence links in Asean still lie more in the realms of confidence-building than in functional co-operation towards practical objectives such as joint defence planning, joint initiatives in arms purchasing and production, developing compatibility between different military doctrines and armed forces. An important exception is the cooperation regarding joint peacekeeping efforts, initiated only recently and have been driven by the present East Timor and other peacekeeping operations rather than by any strategic design of Asean. Moreover, these efforts are just at the very beginning and reveal once again how difficult it still is to deepen the military dimension of intra-Asean co-operation. Characteristically, it is less Asean itself than the FPDA which opens channels for communication regarding defence issues. The Intra-Asean defence relationships are therefore still characterised by a strange mixture of cooperation, competition and latent conflict that provides a striking picture of Asean's self-declared image of an established and successful regional security order. Thus in particular, the defence planning of Singapore and Malaysia is at least partly based on the mistrust between each other, stimulating their arms acquisition policies and new threat perceptions toward each other. In this light, two analyses have concluded:

*'The absence of multilateral defence co-operation between Asean's members, and the widespread lack of substance (other than in the sense of confidence-building) in bilateral defence co-operation indicate the most widely underestimated influence on defence policies in the region.'*¹²⁴

*'Asean might never be a Nato but there is no reason why it should not present a more robust and united front to those who tend to ignore the association or take advantage of the Asean way. The combined forces of Asean are in total impressive in quantity and quality. But they are, it must be admitted, lacking in cohesion, definition of objectives, and even general co-operation. Major benefits would accrue if these limitations were to be addressed.'*¹²⁵

The deepening of intra-Asean defence cooperation is also important because Asean's defence postures have begun to shift from an emphasis on counter-insurgency to conventional defence against external attacks. By combining their defence efforts, Asean would be able militarily to deter potential aggressors. As the Australian defence expert *Brian Cloughley* noted at the end of 1997:

*'If there is not a vigorous response by the Asean members as a defence grouping they could find themselves not only isolated, militarily, concerning the Spratlys (as they appear to be at the moment, diplomatically witness the ARF meeting) but bereft of significant economic resources to which they otherwise might have been able to lay claim. The Asean way works well when gentlemen are involved, as they have been for so long. It might not be a solution when the seas are full of sharks.'*¹²⁶

Moreover, without raising transparency, intensifying *Confidence and Security Building Measures* (CSBMs) and deepening defence co-operation within Asean, misperceptions in crisis could potentially increase and lead to pre-emptive or preventive military actions during crisis and conflicts. The current financial and economic crisis might have reduced or postponed concerns about those acquisition trends and their security implications. But unfortunately, the decline of regional defence expenditure has not only affected future procurement programmes, operations, and training but also defence cooperation between Asean member states. Normally, one could argue that defence cuts would result in enhanced rather than decreased defence cooperation by sharing the common costs of training and education. Furthermore, as a result of cancelling joint training and exercise activities as well as decreasing the

attendance of military officers at Staff Colleges in other countries disproportionately from the cuts in defence expenditures, the process of enhancing CSBM and raising military transparency in the region has been severely damaged. In this field, too, multilateralism had lost momentum by 1997. If Asean wishes to avoid future intra-Asean security dilemmas and at the same time to increase its efficiency in defending its national and regional security interests, Asean member states must not only be willing to seriously discuss greater ASEAN security co-ordination, but also greater defence cooperation.

In the meantime, the PRC's policy of underpinning its territorial claims with concrete political and military steps as well as Beijing's unwillingness not to rule out the use of force for achieving political objectives have alarmed even those segments of Asean's political elites that have always favoured close relations with China.

Nonetheless, China's sovereignty claim has ultimately fastened the reconfiguration, in both conceptual and operational terms, of the defence policies of Asean countries.¹²⁷ But the Indonesian crisis and the East Timor problem have halted all efforts to redefine Indonesia's strategic interests *vis-à-vis* China and the South China Sea. Once again, domestic stability understandably has become for Indonesia and probably also the Philippines again the major preoccupation and will continue to dominate the national agenda over the next few years.

China may still believe it is able to achieve its objectives over time without resorting to massive confrontation with neighbouring claimant states. Beijing's present rather contradictory policies and actions in the South China Sea follow a traditional '*divide and conquer*' strategy, and are fully in line with its strategic culture and notions of war and diplomacy.¹²⁸

Whereas all claimants to territories in the South China Sea have stated their preference for peaceful solutions and negotiations, China appears to have kept the military option open. Arguments put forward by Western experts that occupied islands can not be defended by the PLA presently¹²⁹ overlook the fact that China is a growing nuclear power and that Asean countries as well as Japan, Taiwan, and others lack sufficient amphibious forces to recuperate occupied islands. Only the US has sufficient and effective amphibious capacities to perform such a task in the South China Sea. But making use of the military option would constitute a high risk game for Washington, too. Reliance on aircraft carriers and *Aegis*-equipped surface escort ships, for instance, would be inadequate if not dangerous in littoral conflicts in the Taiwan Strait or the

South China Sea.¹³⁰ Ultimately, what matters in this respect are security perceptions and expectations rather than objective strengths and weaknesses of claimant countries. Military history, including that of China, has abundant examples of weaker forces defeating much stronger rivals. Circumstances, motivation, and a superior strategy have often been more important than numbers.

Whether the US would want to incur such a risk for a few uninhabited islands in the South China Sea is indeed the crucial question for Asean security experts. Prior to the outbreak of East Asia's financial crisis in 1997, Asean defence policies and military doctrines were increasingly based on such a scenario which in turn determined acquisitions of state-of-the-art weapons systems.

Although China had verbally agreed not to change the *status quo* in the South China Sea through unilateral steps and to seek a peaceful solution through negotiations, the PRC has continued to test the political will of Vietnam and the Philippines as well as their support within Asean. Moreover, despite signs of solidarity emerging within Asean when China tested its political will in 1995 and 1997, Beijing's efforts to pursue its strategy '*at limiting alliances forming against it have been remarkably successful, particularly during the period they needed this success most: in establishing a physical presence in the Spratlys and gaining some recognition of the legitimacy of China's sovereignty.*'¹³¹ And indeed, China has rather successfully frustrated the attempts to internationalise the dispute, insisting on exclusively bilateral negotiations which provide the PRC with considerable strategic leeway *vis-à-vis* its much weaker opponents.

China's more recent policies in the South China Sea have confirmed the assumption that the PRC follows a dual track strategy of, on the one hand, '*creeping occupation*' to create *faits accomplis* in the South China Sea and, on the other, diplomatic appeasement *vis-à-vis* Asean.

Unable to confront China militarily and to make any difference except by continuing to talk with the Chinese side and trying to get international public opinion behind it, President Estrada pushed the January 1998 VFA with the US through ratification. The agreement provides for joint large-scale exercises between US and Philippine forces on Philippine soil and in the region.¹³² Although China subsequently promised not to build any new structures in the Spratly islands, more '*renovation work*' (as the Chinese side called it) cannot be ruled out in the light of previous experiences. Although China has repeatedly offered '*joint development, including fisheries development and exploitation on an equal sharing*

*basis*¹³³ realisation of such proposals remains dependent upon the readiness of the Philippine side to accept China's territorial sovereignty over the Spratly Islands. Decreasing Asean solidarity even more than China's provocative behaviour have significant long-term security implications for the Association and regional stability. *Kow-towing* to China's increasing assertiveness risks encouraging even more dangerous behaviour.

In this regard, China's ongoing provocative behaviour and future Philippine or Vietnamese counter- and overreactions constitute an '*accident waiting to happen*' that might trigger an otherwise unintended escalation. This trend is further reinforced by increases in competing commercial and military activities and the easy availability of new military hardware, as well as China's lack of recognition of the risks resulting from a unilateral '*creeping occupation*' that changes the status quo in the region.

Since summer 1999, the Philippines and other Asean states have tried to manage territorial conflicts in the South China by drafting an Asean code of conduct as a CBM and by exercising '*self-restraint and refrain from unilateral actions*' that might increase tensions. Manila had hoped that the code would deter China from building more structures in other parts of the disputed island chain. Even more important was the expectation that the code of conduct would restore Asean unity in dealing with sovereignty and maritime disputes in the South China Sea, thus strengthening ASEAN's collective leverage to constrain China's '*creeping assertiveness*' in the area.

Once adopted, such a code could help to build trust, enhance cooperation, and reduce tension in the Spratlys. However, it would be naive and unrealistic to believe that it would really resolve territorial disputes in the South China Sea. In the past, China has already signed bilateral codes of conduct with the Philippines (August 1995) and Vietnam (November 1995), without abiding by the very principles spelled out in these agreements. Neither the abovementioned codes nor Beijing's signing of the *UN Charter of the Law of the Sea (Unclos)* in April 1996 have deterred the PRC from extending the structures it had previously built on disputed islands in the South China Sea. Furthermore, agreements such as the newly-proposed regional code of conduct are declarations of intent rather than legally binding instruments. As long as Asean shies away from collectively confronting China as had been the case in 1995 and 1997, Beijing will hardly feel prompted to halt its '*creeping assertiveness*' in the South China Sea.¹³⁴

Against this background, the US attempt to stay neutral for as long as the freedom of navigation is guaranteed and *S/locs* remain open and to otherwise adhere to an excessively legalistic interpretation has provided China with opportunities to skillfully advance its 'creeping assertiveness' by playing on legal ambiguities reinforced by US policies. In the meantime, certain experts and policy circles in Washington have become more concerned about the present situation.¹³⁵ Obviously, future US policies towards the South China Sea remain critical for stability in the entire Southeast Asian region.

Conclusions and Perspectives

The present economic and financial upturn after the Asian crisis has allowed the resumption of the previously announced, but then halted modernisation efforts, particular of the air- and naval forces in East Asia. The increasing capabilities offered by the proliferation of anti-ship missiles and submarines creates new military threats and could deepen the security dilemmas in the region such as fuelling the arms build-up to a real regional-wide arms race. Even for the US carrier battle groups, the increasing numbers of submarines and small, fast-attack missile craft raises the risk level of its regional operations. Regional waters might become even more dangerous, when larger class submarines and destroyers as well as frigates become more common. Moreover, a destabilised Indonesia, confronted with breakaway fractions or rebel forces could acquire vessels with anti-ship and other missiles which would cause serious security problems in Southeast Asia.

Asean states need not only to rebuild political solidarity but also to increase defence co-operation in order to overcome their traditional strategies of self-reliance which have often deepened the classic security dilemmas. The recent first multilateral meeting of senior intelligence officials of Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand can be seen as a first step in this direction. The intelligence exchange will be held annually which will also help to build trust and confidence between all involved parties and to prepare their armed forces for future multilateral peacekeeping operations. Another positive step can be seen in the inclusion of Singapore in the traditional bilateral military exercise '*Cobra Cold*' between Thailand and the USA. Malaysia may join next year.

Japan, by its own standards, is in the midst of a '*revolution*' in terms of

its future regional security and defence policies. In February 2000, the Japanese foreign ministry announced that Tokyo would be willing to contribute armed coastguard vessels to multinational anti-piracy patrols in the Malacca Straits.¹³⁶ Japan has thus interpreted its constitutional notion of 'self-defence' as including waters more than 2,000 miles away from Tokyo. The steady extension of the defence perimeter mirrors the strategic importance of SLOCs and the South China Sea for the economic survival of Japan as well as the increasing strategic and geopolitical rivalry with China in East Asia and beyond. The October 1999 hijacking of a large Japanese vessel by pirates and increasing economic and political instability in Indonesia have underscored the need for outside assistance to cope with the threat of piracy in the region. To counter historical anti-Japanese sentiments and mistrust in Southeast Asia, Japan will dispatch less-conspicuous, civilian-controlled coastguard vessels of its Maritime Safety Agency instead of regular military vessels of its Self-Defence Forces. Contrasting with past practice, several Southeast Asian governments have accepted the offer, thus also signalling a concern with maintaining the regional balance of powers. India, too, appears determined to counterbalance China's increasing influence and has established an informal but deepening security-cooperation with Japan and Vietnam.¹³⁷ These remarkable developments indicate that the strategic rivalry have increased between China and Japan as well as between China and India.

Tokyo's ongoing search for a future role in the region, presently reflected in an unprecedented debate over the possible revision of the anti-militaristic and pacifistic Article 9 of the Japanese Constitution,¹³⁸ is a sign that Japan has been slowly coming to grips with a reality it used to deny: '*It (Japan) is a great power with strategic interests as pressing as its economic ones.*'¹³⁹

Against this background, and given China's suspicion of a redefined US-Japan alliance, Washington and Tokyo need to demonstrate that their pact aims to preserve regional peace and stability rather than contain the PRC. In this respect, and considering Japan's repeated efforts to involve Beijing in closer bilateral and multilateral security dialogues, Asean can play a useful role in reassuring China that the re-definition of the alliance is in the interest of the entire region and not specifically directed against China. Beijing, in turn, has to recognise that disputes with Taiwan are an internal matter only as long as they do not turn violent and affect the security interests of other neighbouring countries.

Ultimately, however, regional stability will depend on a strong and

sustained US engagement, including the maintenance of substantial political, economic, and military means as well as stability in the Japan-China-US triangle at a time when all three operate from positions of relative strength. In this context, the US-Japan alliance will remain the linchpin of Asean's stability, Japan's security in general; and preservation, for the time being, of Japan's, South Korea's and Taiwan's non-nuclear weapon status.

Notes

- ¹ See also Frank Umbach, 'Strategic Changes in the Asia-Pacific Region: The Dimension of Military-Technology Diffusion and Proliferation of Advanced Conventional Weaponry', and Kusnanto Anggoro, 'Strategic Changes in the Asia-Pacific Region: The Dimension of Military-Technology Diffusion and Nuclear Proliferation', both in: Joachim Krause/Frank Umbach (Eds.), *Perspectives of Regional Security Cooperation in Asia-Pacific: Learning from Europe or Developing Indigenous Models?*, (Bonn/DGAP: Arbeitspapiere zur Internationalen Politik) No. 100, September 1998), pp. 43-69 and 71-84.
- ² For the background see also Frank Umbach, 'Strategic Trends in the Regional Balance of Power and Potential Hotspots', paper prepared for the third meeting of the Waldbroel Group on the European Coordination of Security Policies vis-à-vis the Asia-Pacific, Waldbroel, Bundeswehr Office for Studies and Exercises, March 27-28, 2000.
- ³ See Alexander Nicoll, *Financial Times (FT)*, 10 May 2000, p. 4.
- ⁴ See, for instance, Chien-pin Li, 'Fear, Greed, or Garage Sale? The Analysis of Military Expenditure in East Asia', *The Pacific Review* 2/1997, pp. 274-288; Panitan Wattanayagorn/Desmond Ball, A 'Regional Arms Race?', *The Journal of Strategic Studies*, September 1995, pp. 147-174; Paul Dibb, 'The Future Military Capabilities of Asia's Great Powers', *Jane's Intelligence Review (JIR)*, May 1995, pp. 229-233; John Sislin/David Mussington, 'Destabilizing Arms Acquisitions', *ibid.*, February 1995, pp. 88-90; Bates Gill, 'Europe Hoping for Lion's Share of Tiger Economies', in: Kevin Borrás, 'Jane's Defence'97. The Yearbook from Jane's Defence Magazines' (Coulson: Jane's Information Group Ltd, December 1996), pp. 65, 67-72; *idem*, 'Arms Acquisition in East Asia', Appendix 13E, in: 'SIPRI Yearbook 1994' (Oxford-New York: Oxford University Press, 1994), pp.551-562; Michael T. Klare, 'East Asia's Militaries Muscle Up', *The Bulletin of the Atomic Scientists*, January-February 1997, pp. 56-58; *idem*, 'The Next Great Arms Race', *Foreign Affairs* (Summer 1993), pp. 136-155; See Bilver Singh,

'ASEAN's Arms Procurements: Challenge of the Security Dilemma in the Post Cold War Era', *Comparative Strategy* 2/1993, pp. 199-223; Ro-Myung Gong/Gerald Segal, 'The Consequences of Arms Proliferation Asia I and II', in: 'Asia's International Role in the Post Cold War-Era', Adelphi-Paper 276 (London: Brassey's for the IISS, 1993), pp. 42-61; Gerald Segal, 'Managing New Arms Races in the Asia/Pacific', *Washington Quarterly*, Summer 1992, pp. 83-101; *idem*, 'New Arms Races in Asia', *JIR*, June 1992, pp.269-271; Desmond Ball, 'Arms and Affluence: Military Acquisitions in the Asia/Pacific Region', *International Security*, Winter 1993-94, pp. 78-112.

- ⁵ See F.Umbach, 'Strategic Changes in the Asia-Pacific Region'.
- ⁶ See Panitan Wattanayagorn/Desmond Ball, 'A Regional Arms Race?', here pp. 149 ff.
- ⁷ See Robert Karniol/Nick Cook/Damian Kemp, 'Regional Halt on New orders As Crisis Swells', *Jane's Defence Weekly (JDW)*, 18 February 1998, pp. 21-22, here p. 21.
- ⁸ Most acquisitions involve modern diesel-electric boats (known as SSKs) such as Australia's six *Collin-class* SSKs, China's up to 22 Russian *Kilo-class* SSKs, Indonesia's five *ex-German Navy Type 206/206A* small coastal submarines, Japan's two *Oyashio-class* boats, Pakistan's three French built *Agosta 90B*-SSKs, South Korea's six locally built 1500-tonne SSKs (a German *Class 209/Type 1500-model*), Singapore's four *ex-Swedish Sjoormen-class* coastal submarines and India's German and Russian-class SSKs - see P.K. Sengupta, 'Submarines for Asia-Pacific Navies: From SSK to SSN/SSBN'.
- ⁹ See Panitan Wattanayagorn/Desmond Ball, 'A Regional Arms Race?', p.157.
- ¹⁰ Quoted following an article by Michael Richardson, *IHT*, 14 August 1997, pp.1 and 6.
- ¹¹ SIPRI (Ed.), 'Yearbook 1998: Armaments, Disarmament and International Security' (Oxford University Press: Oxford-New York 1998), here p. 298.
- ¹² *Ibid*, here p. 192.
- ¹³ See *JDW*, 18 February 1998, p. 30.
- ¹⁴ See Prasun K. Sengupta, 'Corvettes and Missile Gunboats for Asia-Pacific Navies', in: *Asian Defence Journal (ADJ)* 8/1998, pp. 27-31, here p. 27.
- ¹⁵ See IISS (ed.), *The Military Balance 1997/98*. Oxford 1997, p.264.
- ¹⁶ Over the same period, the share of European countries declined from 38 per cent to 18 per cent, whilst the share of deliveries to the Middle East (without North Africa in contrast to IISS data) remained constant at around 25 per cent - see Ian Anthony/ Pieter D. Wezeman/ Simon T. Wezeman, 'The Trade in Major Conventional Weapons', in: SIPRI (Ed.), 'Yearbook 1997: Armaments, Disarmament and International Security' (Oxford University Press: Oxford-New York 1997), pp. 267-291, here p. 274 and SIPRI (Ed.), 'Yearbook 1999', p. 425 f.

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- ¹⁷ See F. Umbach, 'Strategic Changes in the Asia-Pacific Region', here p. 52 f.
- ¹⁸ See 'China's Military Expenditure', in: IISS (ed.), *The Military Balance 1995-1996* (London: Oxford University Press, 1995), pp.270-275 and Shaoguang Wang, 'Estimating China's Defence Expenditures: Some Evidence from Chinese Sources', *The China Quarterly*, September 1996, pp. 889-911.
- ¹⁹ Andrew Hull/David Markov, 'A Changing Market in the Arms Bazaar', *JIR*, March 1997, pp. 140-142, here p. 142.
- ²⁰ See the empirical study by Chien-pin Li, 'Fear, Greed, or Garage Sale? The Analysis of Military Expenditure in East Asia', *Pacific Review* 2/1997, pp.274-288, here p. 285.
- ²¹ See *The Korean Herald (TKH)*, 15 August 1997, p.3.
- ²² Paul Dibb, 'The Revolution in Military Affairs and Asian Security', *Survival*, Winter 1997-98, pp. 93-116, here pp. 100 ff. and idem, 'Defence Modernisation in Asia: Towards 2000 and Beyond', *Contemporary Southeast Asia*, March 1997, pp. 347-360, here pp. 355 ff.
- ²³ See also Zara Dian, 'The Twenty-First Century Pacific Asian Army', *ADJ*, November 1995, pp. 36-40, here p. 39.
- ²⁴ See 'Reaching Out. Regional Rapid Deployment', *JDW*, 15 April 1998, pp. 29-35 and Prasun K. Sengupta, 'Age of the Rapid Deployment Force', *ADJ* 2/1998, pp. 46-49.
- ²⁵ But not all weapon acquisition is *per se* destabilising. A useful definition is: '*Destabilizing arms acquisitions are defined as those arms acquisitions which increase perceptions of vulnerability in the state which imports or produces them, or which increase feelings of vulnerability in neighbours. The offensive or defensive character of particular weapons is not at issue. The central point is the shift in perceptions of weakness and strength held by political elites resulting from weapons acquisitions*' - see John Sislin/David Mussington, '*Destabilizing Arms Acquisitions*', here p. 88.
- ²⁶ It allocates some 60 per cent of its defence budget until the year 2000 to the Air and Naval Forces in contrast to some 40 per cent in the past - see Panitan Wattanayagorn/Desmond Ball, A 'Regional Arms Race?', p.160.
- ²⁷ This chapter is based on two former analyses by F. Umbach, 'Financial Crisis Slows But Fails to Halt East Asian Arms Race - Part One', *JIR*, August 1998, pp. 23-27, and Part Two, *ibid*, September 1998, pp. 34-37 and idem, 'Economic Slowdown and the Impact on Regional Military Modernisation', Working Group 5: Military Roles in Transnational Security Biennial Conference of the *Asia-Pacific Center for Security Studies (APCSS)*, Honolulu, 30 August-2 September 1999.
- ²⁸ See Joris Janssen Lok, 'Regional Submarine Programme Stalled', *JDW*, 18 February 1998, pp. 33, 35, 37.
- ²⁹ See *Sueddeutsche Zeitung*, 17 June 1999, p. 8 and *Tagesspiegel*, 17 June 1999, p. 5. See also Desmond Ball, 'Re-examining the Global and Regional

Mechanism for Crisis Management and Crisis-Prevention', paper prepared for the 'Asia-Pacific Security Forum', Edsa Shangri-La Hotel, Philippines, 19-20 December 1998; Mark Farrer, 'Uneven Impacts: Economic Crisis and Regional Air Power', in: A-PDR 1999 *Annual Reference Edition*, pp. 33-34; A.W. Grazebrook, 'Some Regional Navies Continue to Develop', *ibid*, pp. 36-37, Wilfried A. Herrmann, 'Tiger ohne Waffen?', *Österreichische Militärische Zeitschrift (ÖMZ)* 5/1998, pp. 554-559 and *idem*, 'No New Ships in the West-Pacific?', *Naval Forces* 5/1998, pp. 69-75; 'Asian Defence Aviation – Some Progress, Some Stops', in: A-PDR, February-March 1999, p. 20.

- ³⁰ See 'China Plans Progress While Others Look On', *JDW*, 18 February 1998, pp. 22,24-26.
- ³¹ See F.Umbach, 'Financial Crisis Slows But Fails to Halt East Asian Arms Race - Part Two', here pp. 35ff.
- ³² See Paul Handley, 'Turbulent Times. Asian Crisis Halts Aerospace Dreams', *JDW*, 9 September 1999, pp. 40-45.
- ³³ See Prasun K. Sengupta, 'The Republic of Korea's Armed Forces at 50', *ADJ*, 10/1998, pp. 6-17 und 'Korea to Spend \$69.3 Billion in 5-Year Defence Plan', *ibid* 3/1999, p. 56; Robert Karniol, 'S Korea Plans to Spend \$6.35b up to 2004', *JDW*, 24 February 1999, p. 4; 'S Korea Plans to Order 20 Extra F-16s', *ibid*, 17 March 1999, p. 3; Robert Karniol, 'Seoul to Build More F-16s', *ibid*, 26 May 1999, p. 14; 'Looking Long Term', *Newsreview*, 20 February 1999, p. 8.
- ³⁴ See Robert Karniol, 'Seoul to Build More F-16s', *JDW*, 26 May 1999, p. 14
- ³⁵ See *ADJ* 1&2/2000, p. 85; *ADJ*, 5/1999, p. 62; *ibid* 1&2/1999, p. 56 and *JDW*, 17 March 1999, p. 4.
- ³⁶ See Prasun K. Sengupta, 'Contract Signed for First Six NGPVs for RMN', *ADJ* 3/1999, pp. 36-37 and Dzirhan Mohadzir, 'Malaysia Signs Patrol Vessel Contract', A-PDR, October-November 1998, p. 22.
- ³⁷ See *JDW*, 10 March 1999, p. 8.
- ³⁸ See *ADJ* 10/1998, p. 64.
- ³⁹ See also Prasun K. Sengupta, 'AFP: Force Modernisation - Aims and Plans', *ADJ* 6/1999, pp. 12-18 and Issak Zulkarnen, 'AMD'99 - Manila's Defence Show Case', *ADJ* 5/1999, p. 58.
- ⁴⁰ See *ADJ* 7/1999, p. 62.
- ⁴¹ See *JDW*, 6 January 1999, p. 12.
- ⁴² See 'An Additional Rmb 180 Billion for the Military', *Trend* (Hong Kong), June 1999, pp. 16-17, here following: Inside China Mainland, September 1999, pp. 34-36. According to another Asian intelligence source, however, China gave the armed forces "just" about \$7 billion last year in an extra-budgetary allocation to buy or develop advanced weapon systems – see John Pomfret, *IHT*, 24 February 2000, p. 1 and 5, here p. 5.
- ⁴³ See *JDW*, 17 May 2000, p. 15 and *Taipei Times*, 10 May 2000.

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- ⁴⁴ See Jonathan Brodie, 'China Moves to Buy More Russian Aircraft, Warships and Submarines', *JDW*, 22 December 1999, p. 13. Meanwhile, some progress has been made in regard to sell two more Sovremenny-missile destroyers - see Nikolai Novichkov, *ibid.*, 15 March 2000, here p. 12.
- ⁴⁵ See *Kommersant-Daily*, 5 May 2000, p. 4.
- ⁴⁶ See *Taipei Times*, 30 November 1999 and *Newsweek* (US Edition), 6 December 1999.
- ⁴⁷ See *JDW*, 18 August 1999, p. 16
- ⁴⁸ See Bill Gertz, *Washington Times*, 16 March 2000.
- ⁴⁹ See Interfax (Moscow), 2 September 1999 and Vladimir Radyuhin, *The Hindu*, 4 September 1999.
- ⁵⁰ See Duncan Lennox, 'China's New Cruise Missile Programme 'Racing Ahead'', *JDW*, 12 January 2000, p. 12.
- ⁵¹ See Nikolai Kuchin, 'A Nuclear Deal of the Century?', *New Times*, August 1997, pp.42-43.
- ⁵² This chapter is based on my new publication: 'Nuclear Proliferation Challenges in East Asia and Prospects for Co-operation - A View from Europe', in: Kurt W. Radtke/Raymond Feddema (Eds.), 'Asian Concepts of Comprehensive Security: Their Implications for Europe', *Royal Brill Academic Publishers* 2000, pp. 66-133, here pp.28 ff.
- ⁵³ Quoted following the article 'China Upgrades Medium-Range Missiles Targeting East Asia', *ADJ* 8/1997, p.63.
- ⁵⁴ **MIRV = Multiple Independently targetable Re-entry Vehicle.**
- ⁵⁵ See Alastair Iain Johnston, 'China's New 'Old Thinking'. The Concept of Limited Deterrence', *International Security*, No.3 (Winter) 1995/96, pp. 5-42, here p. 36. To China's MIRV development programmes see James Lamson/Wyn Bowen, 'One Arrow, Three Stars': China's MIRV Programme - Part I', *JIR*, May 1997, pp. 216-218 and Part II, *ibid.*, June 1997, pp. 266-269.
- ⁵⁶ See also Yang Huan, 'China Strategic Nuclear Weapons', in: Michael Pillsbury (Ed.), *Chinese Views of Future Warfare* (Washington D.C.: National Defence University Press, 1997), pp.131-135, here p.134f.; Dunbar Lockwood, 'The Status of US, Russian, and Chinese Nuclear Forces in Northeast Asia', pp.332ff.; *Holly Porteous*, 'China's View of Strategic Weapons', *JIR*, March 1996, pp. 134-136; in context see also Vipin Gupta, 'Assessment of the Chinese Nuclear Test Site Near Lop Nor', *ibid.*, August 1993, pp. 378-381 and Yan Kong, 'China's Nuclear Bureaucracy', *ibid.*, July 1993, pp. 320-326.
- ⁵⁷ See also Nigel Holloway, 'Touchy Issue. China Gets Defensive on Missile Reductions', *FEER*, 23 October 1997, p 29 f.
- ⁵⁸ See Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation', here p. 562 f.

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- ⁵⁹ See RIPS (Ed.), *Asian Survey Security 1995-96* (London-Washington: Brassey's, 1996), here p. 29 f. and Paul H. B. Godwin, 'Uncertainty, Insecurity and China's Military Power', *Current History*, September 1997, pp. 252-257, here p. 257.
- ⁶⁰ See John Wilson Lewis/Hua Di, 'China's Ballistic Missile Programs. Technologies, Strategies, Goals', *International Security*, Fall 1992, pp. 5-40, here p. 11.
- ⁶¹ See Wyn Bowen/Stanley Shepard, 'Living under the Red Missile Threat', here p. 561 and John Downing, 'China Develops Cruise Missiles', *Asia-Pacific Defence Reporter (A-PDR)*, August-September 1997, p. 6.
- ⁶² See Duncan Lennox, 'China's new Cruise Missile Programme 'Racing Ahead'', *JDW*, 12 January 2000, p. 12.
- ⁶³ Quoted following the article by Barbara Starr, 'China Could 'Overwhelm' Regional Missile Shield', *JDW*, 23 April 1997, p. 16.
- ⁶⁴ See Alastair Iain Johnston, 'China's New 'Old Thinking'', here p. 21 f.
- ⁶⁵ See also Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', here p. 573 f.
- ⁶⁶ See F.Umbach, 'The World Gets Wise to P'yongyang's Nuclear Blackmail – Part Two', *JIR*, Oktober 1999, pp. 35-39.
- ⁶⁷ See Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', here p. 563.
- ⁶⁸ See also Nan Li, 'The PLA's Evolving Warfighting Doctrine, Strategy, and Tactics, 1985-95', here p. 460.
- ⁶⁹ See Paul H. B. Godwin, 'From Continent to Periphery', here p.474.
- ⁷⁰ Alastair Iain Johnston, 'Prospects for Chinese Nuclear Force Modernisation: Limited Deterrence versus Multilateral Arms Control', here pp.564ff.
- ⁷¹ See Greg Gerardi/Richard Fisher Jr., 'China's Missile Tests Show More Muscle', *JIR*, March 1997, pp.125-129 and M.V. Rappai, 'Chinese Military Exercises. A Study', *Strategic Analysis*, November 1996, pp.1119-1131.
- ⁷² See G. Milhollin, *IHT*, 1-2 March 1997, p.8., *ibid.*, 13 June 1997, p.5 and J. Gerth/M. R. Gordon, *ibid.*, 28 October 1997, pp.1 and 10.
- ⁷³ See also Nigel Holloway, 'Cruise Control', *FEER*, 14 August 1997, pp.14-16.
- ⁷⁴ See Stephen Fidler, *FT*, 26 May 1999, p.4.
- ⁷⁵ Frank Umbach, 'World Gets Wise to P'yongyang's Nuclear Blackmail – Part One,' in *JIR*, September 1999, pp. 33-36, 'Part Two', *ibid.*, October 1999, pp. 35-39.
- ⁷⁶ See Philip Shenon, *IHT*, 16 July 1998, p. 4, and David E. Sanger, *IHT*, 18 August 1998, pp. 1 and 4.

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- ⁷⁷ See Don Kirk, *IHT*, 1 September 1998, pp. 1 and 4.
- ⁷⁸ See Dana Priest, *IHT*, 27 August 1998, p. 4, and Shawn W. Crispin/Shim JaeHoon, 'Broken Promises,' *FEER*, 22 October 1998, pp. 16 f.
- ⁷⁹ Peter T.R. Brookes, 'High Time to Reevaluate North Korea Policy,' *PacNet Newsletter*, No. 38, 2 October 1998.
- ⁸⁰ See David E. Sanger, *IHT*, 18 August 1998, pp. 1 and 4, here p. 4.
- ⁸¹ See Lee Sung-yul, *TKH*, 24 November 1998, p. 1; *ibid.*, 3 December 1998, p. 5; *ibid.* 4 December 1998, p. 1; *ibid.*, 5 December 1998, p. 2, and Greg Seigle, 'Another N.Korean Missile Launch Near, Says USA,' *JDW*, 9 December 1998, p. 4.
- ⁸² Larry Niksch, 'North Korea's Coming ICBM,' *PacNet Newsletter*, No. 5, 5 February 1999.
- ⁸³ Huntley/Savage, 'Agreed Framework in Crisis'.
- ⁸⁴ Ralph A. Cossa, 'South Korea's Package Deal,' *PacNet Newsletter*, No. 10, 12 March 1999.
- ⁸⁵ On *Kumchang-ri* and other nuclear facilities in North Korea see in particular Joseph S. Bermudez Jr., 'Exposing North Korea's Secret Nuclear Infrastructure – Part One', *JIR*, July 1999, pp. 36-41; 'Part Two', *ibid.*, August 1999.
- ⁸⁶ The team was permitted to measure all underground areas and to take soil and water samples.
- ⁸⁷ At least 30 North Koreans were killed, one DPRK torpedo boat was sunk, and four others were damaged. On the other side, five South Korean patrol ships were damaged, and nine sailors were injured. See Mark J. Valencia/Jenny Miller Garmendia, *IHT*, 17 December 1999, p. 10; John Burton/Stephen Fidler, *FT*, 16 June 1999, p. 1 and Trevor Hollingsbee, 'Koreans Clash in the Yellow Sea,' *JIR*, July 1999, p. 2.
- ⁸⁸ See *IHT*, 8 July 1999, p. 6.
- ⁸⁹ See Lee Sung-yul, *TKH*, 1 January 1997, p. 2.
- ⁹⁰ *Ibid.*
- ⁹¹ See *TKH*, 15 August 1996, p.9 and 'North Korea. A Potential Time Bomb', *JIR*, Special Report No. 2, 1994, here pp .8 ff.
- ⁹² Italy was the first G-7 member to establish diplomatic relations in January 2000. Canada and Japan have been holding talks on a normalisation of relations. The Philippines have said they would establish official relations and explore possibilities to bring the DPRK closer to Asean. Australia has entered into discussions on the re-establishment of ties. Kim Jung-il, in an unusual gesture, visited the Chinese embassy in Pyongyang in March 2000. Russia signed a new friendship treaty on 9 February 2000 and has been trying to increase its influence on the Korean peninsula and in the Northeast Asian region by maintaining a balanced relationship with both Koreas. Unlike the

1961 mutual defence pact, in which Moscow had pledged to fight alongside its ally in case of war, the new treaty contains no such mutual defence automatism. Pyongyang has moderated its traditional hostility towards Washington and Seoul.

- ⁹³ See also Shim Jae Hoon, 'Signs of a Thaw', *FEER*, 10 February 2000, p. 24; Lorien Holland, 'Hello, World,' *FEER*, 23 March 2000, p. 24, and Howard W. French, *IHT*, 18-19 March 2000, pp. 1 and 5.
- ⁹⁴ See also Bates Gill, 'The Divided Nations of China and Korea: Discord and Dialogue', *SIPRI* (Ed.), *Yearbook 1996: Armaments, Disarmament and International Security* (Oxford: Oxford University Press, 1996), pp.133-144.
- ⁹⁵ For the background see also Kay Möller, *Taiwan als Problem internationaler Sicherheitspolitik*, SWP-AP 3121, Ebenhausen, March 2000.
- ⁹⁶ The document is available via Internet - <http://www.nytimes.com/library/world/asia/022200china-taiwan-text.html>.
- ⁹⁷ See Robert Kagan, *IHT*, 13 March 2000, p. 8.
- ⁹⁸ See also Frank Umbach, 'Militärmacht China? Sicherheits-, rüstungs- und militärpolitische Strategien und ihre Auswirkungen auf die regionale Stabilität', Hanns-Seidel-Stiftung (Ed.), *Chinas Rolle in der Weltpolitik an der Schwelle zum 21. Jahrhundert*, (München: Argumente und Materialien zum Zeitgeschehen; forthcoming; the paper can already be found on the web-page of the DGAP – <http://www.dgap.org>).
- ⁹⁹ See John Pomfret, *IHT*, 24 February 2000, pp. 1 and 5.
- ¹⁰⁰ The entire document has been reprinted and can be found in the Internet: <http://www.insightmag.com/archive/200003057.shtml>.
- ¹⁰¹ It is expected that most of these soldiers will cease active service and will be transferred to the people's armed police - a paramilitary force in charge of public order. In the 1980s, *Deng Xiaoping* had already cut the military by 25 per cent, or 1 million men, to about 3 million.
- ¹⁰² See Alastair Iain Johnston, 'China's New Old Thinking', here p. 12 and 19 f.
- ¹⁰³ For China's nuclear modernisation programmes and efforts see also Frank Umbach, 'Nuclear Modernisation and Proliferation Challenges in the Asia-Pacific Region'.
- ¹⁰⁴ See 'Rapid Deployment Key to PLA Modernisation', *JDW*, 15 April 1998, p. 31 f.
- ¹⁰⁵ For Chinese views on the future RMA see Michael Pillsbury (Ed.), *'Chinese Views of Future Warfare'* (Washington D.C.:National Defence University Press, 1997); M. Ehsan Ahrari, 'Chinese Prove to Be Attentive Students of Information Warfare', *JIR*, October 1997, pp. 469-473, and Nigel Holloway, 'Revolutionary Defence', *FEER*, 24 July 1997, pp. 24-25.
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